ORDER NO. VSD9401M241
D1

Service Manual

Panasonic
Professional/Industrial Video

VHS Hi-Fi
Video Cassette Recorder

AG-5210P

K-MECHANISM

Sec. 1 *Operating Instructions*
Sec. 2 *Disassembly Procedures*
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Sec. 5 *Block Diagrams*
Sec. 6 *Schematic Diagram & Circuit Board Diagrams*
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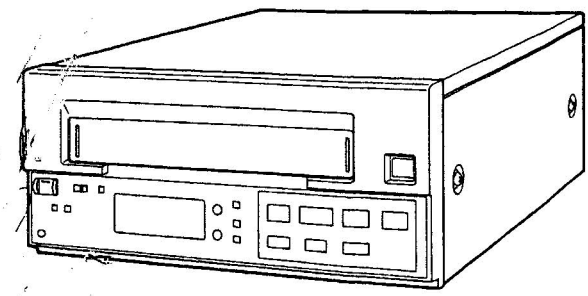

Please use this manual together with the service manual for K-MECHANISM, Order No. VSD9401M242.

SPECIFICATIONS

ITEM	SPECIFICATIONS	ITEM	SPECIFICATIONS
Power	Source: 120V AC 50~60Hz Consumption: Approx. 17 Watts	Television System	EIA Standard (525 lines, 60 fields) NTSC Color Signal
Video	Head: 2 rotary heads, helical scanning system Luminance: FM azimuth recording Color signal: Converted subcarrier phase shift Recording Input Level: VIDEO IN (BNC) 1.0Vp-p, 75Ω Output Level: VIDEO OUT (BNC) 1.0Vp-p, 75Ω Signal-to-noide Ratio: VIDEO more than 45dB (color SP mode)	Tape Speed	SP: 1-5/16 i.p.s. (33.35mm/s) LP: 21/32 i.p.s. (16.67mm/s) SLP: 7/16 i.p.s. (11.12mm/s) Playback Time: 360min. with NV-T120 used in SLP mode FF/REW Time: Approx. 3min. with NV-T120
		Tape Format	Tape width 1/2" (12.7mm) high density VHS tape
		Operating Condition	Temperature: 41°F (5°C) ~104°F (40°C) Humidity: 35% ~80%
Audio	Head: Normal Audio/Control: 1 stationary head Hi-Fi Audio: 2 rotary heads Erase: 1 full track erase 1 Audio track erase Track: 2 tracks (Hi-Fi), 1 track (Normal) Input Level: LINE IN (PHONO × 2) −8dBv, 47kΩ unbalanced Output Level: LINE OUT (PHONO × 2) −8dBv, 1kΩ unbalanced Frequency Responce: Normal: 50Hz~10kHz (SP mode) Hi-Fi: 20Hz~20kHz (SP mode) Dynamic Range: Hi-Fi Audio: 90dB Signal-to-Noise Ratio: Normal Audio: 43dB (SP mode)	Dimension	10-11/16" (W) × 13-9/16" (D) × 4-3/4" (H) 270mm (W) × 344.5mm (D) × 120mm (H)
		Weight	11.8lbs (5.4kg)
		Optional Accessories	Wired remote controller: AG-A11

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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INTRODUCTION

This Service manual contains the technical information which service personnel to understand and service the Panasonic VHS Video Cassette Recorder model AG-5210.
Please use this service manual together with the Service Manual for mechanical adjustments and maintenance procedures of K-Mechanism (Order No. VSD9401M242).

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SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads connectors, control shafts,etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M ohm and 5.2 M ohm.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞.

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k ohm, 10 watts resistor, in parallel with a 0.15uF capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

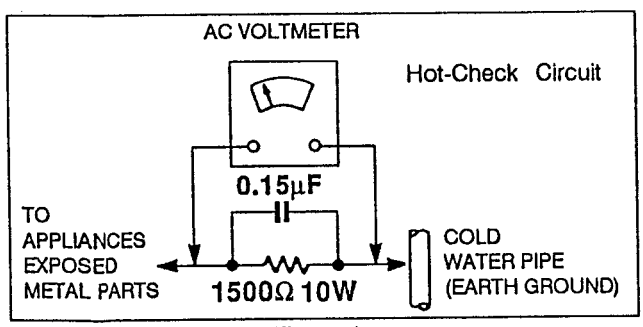


Figure 1

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor chip components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground.
   Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as anti-static can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package untilimmediately before you are ready to install it. (Most replacementES devices are packaged with leads eletcrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION : Be sure no power is applied to the chassis or circuit, and observe all otner asfety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

Features

Recording and playback up to 2 or 6 hours
Using a 1/2" inch VHS cassette tape, you can record and playback in both the SP (2-hour) and SLP (6-hour) mode.
• LP (4-hour) mode is available in playback mode only.

Hi-Fi Audio

Compact and light weight

Search playback
Locating any desired scene or position on the tape is made easy and fast by watching the tape being played back at about 9 times (SP or LP mode) or 11 times (SLP mode) normal speed in forward or reverse direction.
• Noise bars will be appeared in a fixed position to assure a highly viewable playback picture (in the LP mode, more noise may be noticeable, but this is normal).

Clear picture in still and slow-motion modes

Auto power ON
Power is turned ON automatically when the cassette tape is inserted in the VTR or the power cord is connected to the AC outlet.

Automatic tracking function
Tracking can be automatically adjusted by pressing the Tracking "+" and "–" Buttons simultaneously.

Built-in VIDEO AGC (Automatic Gain Control) Circuit
The video level can be adjusted at optimum level, and can be recorded at minimal distortion even with sudden and excessively high input levels.

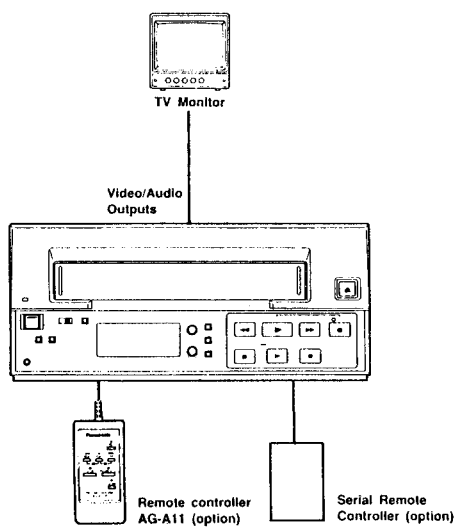
Cassette tape insertion/ejection in power OFF mode
Cassette tape insertion and ejection can be performed even when the power has been turned OFF.

Serial remote operation

Remote operation
Using an optional remote controller AG-A11, you can operate the unit about 5 meters away from the unit.

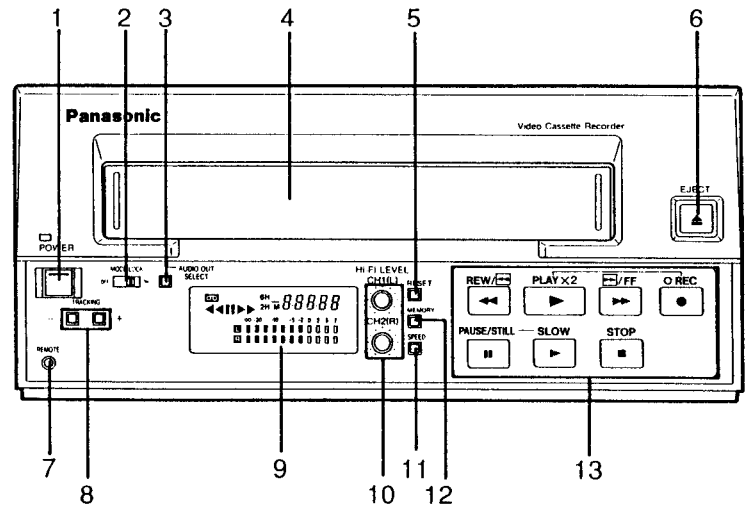
Optional function
The following optional recording function can also be adopted.
For details with the function, refer to your qualified service personnel.
• 4-hour recording (normal audio only)

System Configurations



Controls

Front



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4	Cassette Holder	—	11	Tape Speed Button	7
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7	Remote Control Jack (Mini-Jack)	13			
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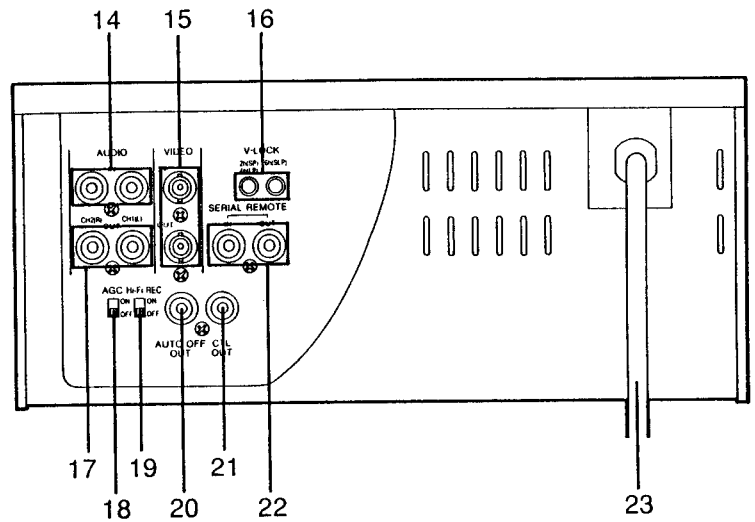
Rear



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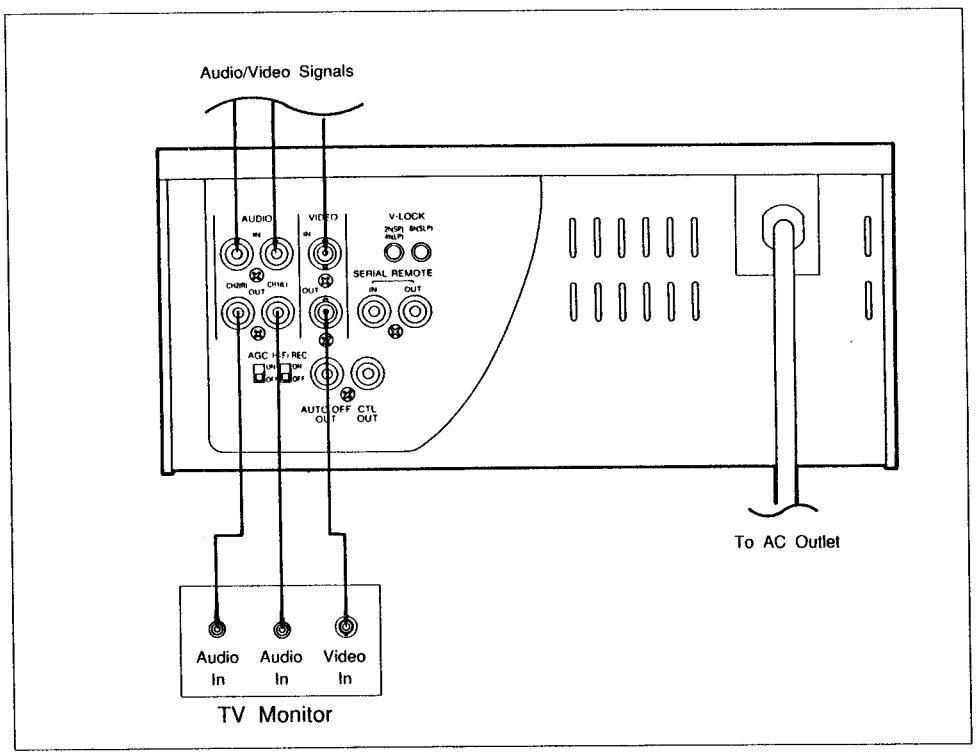
15	Video IN/OUT Connectors (BNC)	6, 7, 11, 12	20	AUTO OFF OUT Connector (PHONO)	11
16	V-Lock (2h•4h/6h) Controls	9	21	CTL OUT Connector (PHONO)	11
17	Audio CH1(L)/CH2(R) OUT Connectors (PHONO)	6, 8, 11	22	Serial Remote IN/OUT Connectors	12
18	AGC Switch*	—	23	Power Cord	—

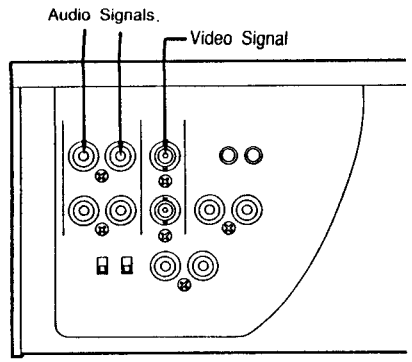
* When this switch is set to ON, the recording level is adjusted automatically.

Connections with TV Monitor (Audio/Video)

When the connection is to be made to a TV Monitor that does not have an 8-pin terminal (a monitor television which has only normal audio and video connection terminals), separate audio (phono) and video (BNC) cables are used to make the connection.



Recording



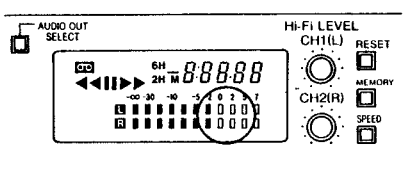
Audio Signals are recorded as described on the table.

CH / Audio Input	Hi-Fi	Normal
CH1 (L)	CH1	CH1
CH2 (R)	CH2	CH2
CH1 (L) & CH2 (R)	Stereo (CH1 & CH2)	Mixed Audio (CH1 & CH2)

• When Hi-Fi REC Switch is set to ON, Hi-Fi audio recording is available.

Preparations
- Set the Memory Button to OFF.
- Load the pre-recorded cassette tape.

Audio Level Adjustment (Hi-Fi sound only)
The audio level can be adjusted only for Hi-Fi audio. Adjust the Hi-Fi Audio CH1(L)/CH2(R) Level Controls so that the audio level meter indication is set to 0 (so that the 0 level is exceeded).



Tape Speed Selection
Press the Tape Speed Button to select the desired tape speed. 2-hour (2H) or 6-hour (6H) indication will appear on the Counter each time the Tape Speed Button is pressed.

2H (SP): Standard mode (recording for approx. 120 minutes using an NV-T120 tape)
6H (SLP): Super long play mode (recording for approx. 360 minutes using an NV-T120 tape)

Operation
Recording starts when the REC and PLAY Buttons are pressed simultaneously.

When the PAUSE/STILL Button is used, the sequence of operation is as follows.

❶ Playback the tape and find the location which is to be recorded. Then press the PAUSE/STILL Button. The " ❚❚ " indication will appear on the Counter and VTR is set to the playback pause mode.

❷ Press the REC and PLAY Buttons simultaneously. The REC lamp now comes on and the VTR is set to the recording pause mode.

❸ When the PAUSE/STILL Button is pressed again, the VTR is released from the pause mode and recording begins.

Stopping Recording
Press the STOP Button.

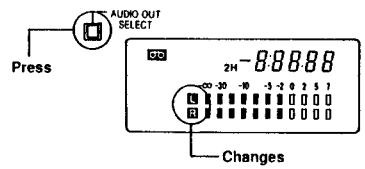
Mode Lock Switch
This switch makes it impossible to switch from one VTR operation to another.
When it is set to ON, the Power Switch and Operation Buttons (except the Eject Button) do not function.
However, operations from the remote controller are available.

Playback

Preparations
- Press the Power Switch to ON.
- Be sure that the Mode Lock Switch is OFF.
- Insert a recorded tape.
- Turn the TV Monitor ON.

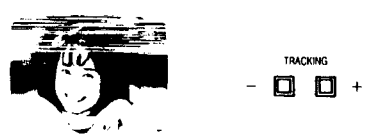
Audio Out Select Button
Set the Audio Out Select Button to the desired position. This is to select the audio signal through Audio CH1(L)/CH2(R) OUT Connectors. Each time the Audio Out Select Button is pressed, the audio output mode will change as follows:

Hi-Fi → L CH → R CH → No indication (Linear)



Tape Speed
There is no need to set the tape speed since setting is automatically made to the speed which the tape was recorded.

Normal Playback
Press the Play Button. " ▶ " indication will appear on the Counter and playback will start.
- Press the Tracking Buttons simultaneously if the image is partially obscured by bands of noise to move the noise out of the picture. If the noise persists, use the "–" or "+" Button for adjustment.



Double-speed Playback
Press the PLAY Button during normal playback. The playback picture can be viewed at about twice normal playback speed. To return to normal playback, press the PLAY Button.
- No sound is heard during double-speed playback.

Slow Motion Playback
Press the SLOW Button during playback. The playback picture can be viewed at a lower speed. Each time the SLOW Button is pressed, the VTR will run at one of the slow motion speeds shown below. To return to normal playback, press the PLAY Button.

Normal speed → 1/30 → 1/20 → 1/15 → 1/10 → 1/6

- If slow motion playback continues for over 10 minutes, the VTR will go into the stop mode automatically.
- No sound is heard during slow motion playback.

Rewind and Fast Forward the tape
When the VTR is in stop mode:
- Press the REW Button to rewind the tape.
- Press the FF Button to move the tape forward rapidly.

Search Playback
- When the FF Button is held down while the VTR is in the playback, slow motion playback or still, the tape will be played back in the forward direction at about 9 times normal speed in SP or LP mode, and at about 11 times normal speed in SLP mode.
- When the REW Button is held down while the VTR is in the playback, slow motion playback or still, the tape will be played back in the reverse direction at about 9 times normal speed in SP or LP mode, and at about 11 times normal speed in SLP mode.
- No sound is heard during search playback.

Use tapes complying with the VHS standard with this unit. The rewind time differs depending on the hub diameter (tape take-up volume).
- Use of Panasonic video tapes is recommended for recording and playback.
  - NV-T120
  - NV-T60
  - NV-T90
  - NV-T30

Still Playback

Press the PAUSE/STILL Button during normal playback or during slow motion playback. Still playback will only return to normal playback mode by pressing the PAUSE/STILL Button once again.

- If noise appears during still playback, set for slow motion mode and adjust with the Tracking Control Buttons to minimize the bands of noise as shown below, then press the PAUSE/STILL Button.

- If still playback continues for more than 5 minutes, the VTR will go into the stop mode automatically.
- A distortion may occur on the picture during still mode, but this is not a malfunction.
- No sound is heard during still mode.
- Color program may be played back in black and white or playback image may be dark during still mode, but this is not a malfunction.

After Finishing Playback

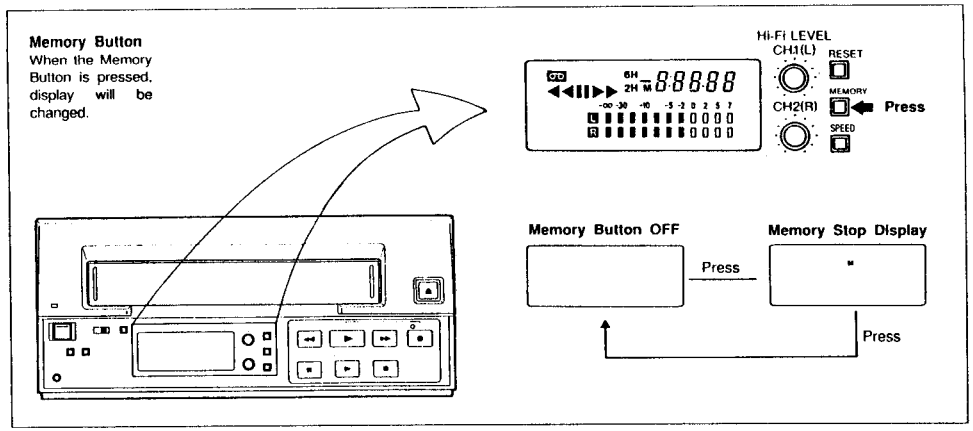
Press the Stop Button to stop the playback.

For playback of tapes recorded in SP mode, exchangeability is guaranteed by the VHS standard, but a stable playback picture may not be obtained for tapes recorded in LP or SLP mode.

Vertical Lock Adjustment

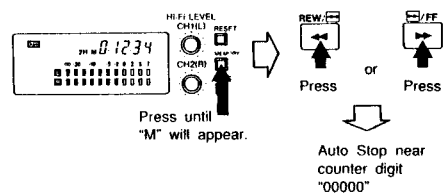
If picture jitters vertically in STILL, adjust the V-Lock Controls on the rear panel, but a one time adjustment should be necessary.
If the TV Monitor has a vertical hold control, adjust this together with the V-Lock Controls.

Counter



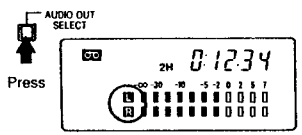
Memory Stop

When the Memory Button is pressed and the "M" display lights on the Counter, the tape can be stopped near counter digit "00000" during FF or REW modes.



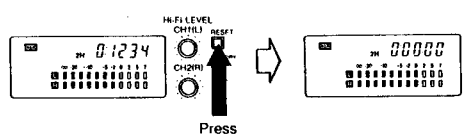
Audio Output

Each time the power is turned ON, Hi-Fi mode is automatically selected for audio output (L and R indications both appear on the Counter). Use the Audio Out Select Button to select for the desired audio output.



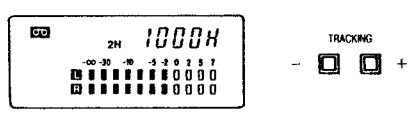
Counter Reset

Pressing the Reset Button clears the counter indication to "00000".



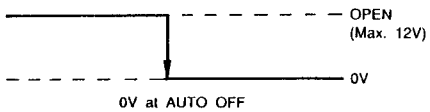
Hour Meter

When the Tracking Buttons are pressed simultaneously in modes besides playback, the total number of hours that the VTR has been used (the cylinder has turned) is indicated on the Counter.



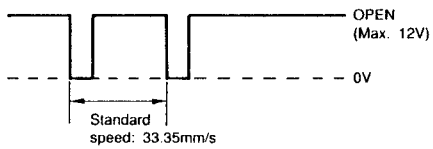
AUTO OFF Output

If any trouble should occur, this unit is set to AUTO OFF. At such a time, the unit stops automatically, and the REC Lamp flashes. At the same time, signals are output from the AUTO OFF OUT Connector on the rear panel. When the Power Switch is set off, AUTO OFF is released.



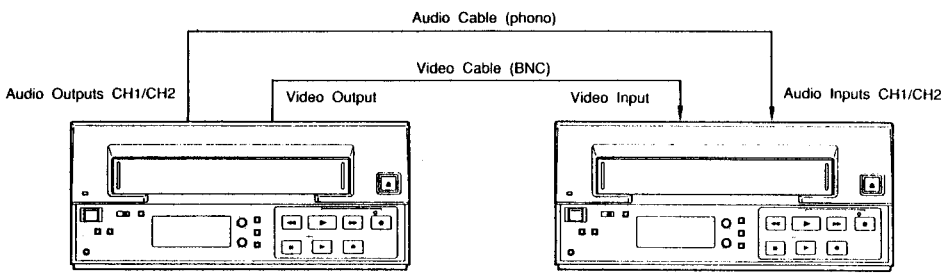
CTL Output

The CTL signal to be recorded on the tape is output in the form shown in the figure below. It can be used for the tape travel count, etc.



Dubbing

- Refer to the figure below for the connections which apply when using two VTRs for dubbing.



AG-5210 for playback
- Memory Button: OFF
- Load the pre-recorded tape.

AG-5210 for recording
- Memory Button: OFF
- Load the unrecorded tape.

Operation

❶ Press the PLAY Button on the playback VTR to start playback.

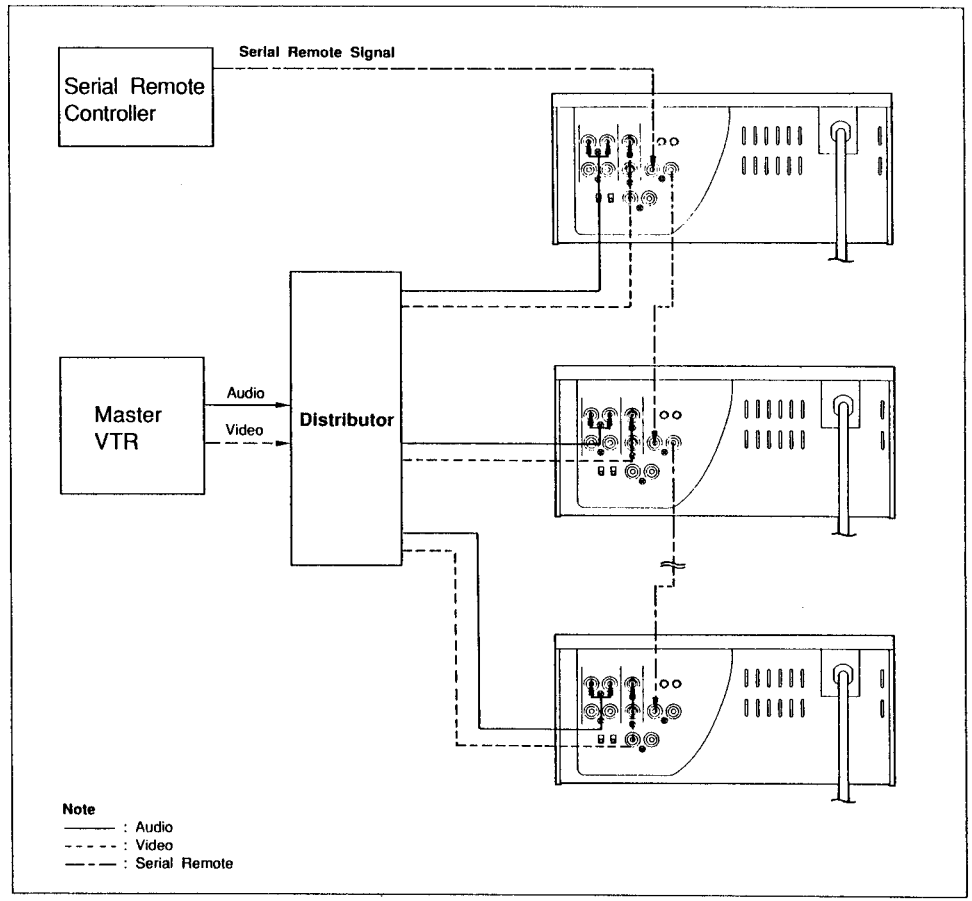
❷ Press both the REC and PLAY Buttons on the recording VTR at the location where the dubbing is to begin, and proceed with dubbing.

❸ To stop the dubbing, first press the STOP Button on the recording VTR and then press the STOP Button on the playback VTR.

- With 6-hour recording for dubbing purposes, use the unit with the Hi-Fi REC Switch at the OFF position.

Serial Remote Control

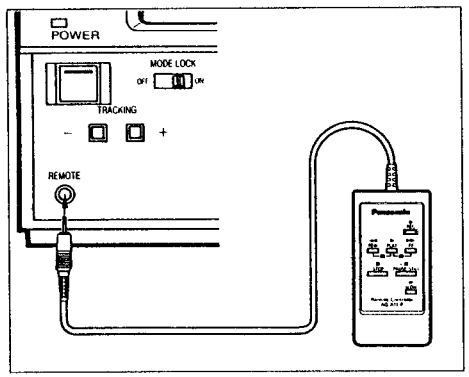
The use of the optional serial remote controller makes it possible to conduct recording, playback and other operations from a distance, as shown in the figure.
For details, consult with your authorized local dealer.



Note
- Do not use the Remote Input/Output Connectors for any purpose except for serial remote control since a breakdown or failure may otherwise occur.

Remote Controller

When the optional accessory remote controller AG-A11 is connected to the Remote Control Jack on the front panel of this unit, the unit can be controlled from a distance instead of by using the buttons on the unit itself.



Troubleshooting

...Check the following points once again.

Trouble	Corrections
No power	• Check that the Power Cord is connected to the AC Outlet.
No operation starts when operation buttons are pressed.	• Check that the Power Switch is ON. • Check that the cassette tape is inserted. • Check the " d " mark. When the " d " mark lights: Take out the cassette tape and leave the VTR on and let it remain at room temperature until " d " mark disappears. Depending on the surrounding conditions, this may take several hours.
The playback picture is noisy or contains streaks.	• Adjust by pressing the Tracking Control Buttons.

Refer servicing to qualified service personnel.

Cautions for Use

- Do not insert fingers or any other objects into the Cassette Holder.
- Avoid operating or leaving the VTR near strong magnetic fields. Be especially careful of large audio speakers.
- Avoid operating or storing the VTR in an excessively hot, cold, or damp environment as this may result in damage both to the VTR and to the tape.
- This unit is supplied with a 3-prong grounded AC plug—do not try to defeat its purpose.
- If the VTR is not going to be used for a length of time, turn the power OFF and disconnect the power plug from the AC outlet.
- Do not leave a cassette tape in the VTR when not in use.
- Do not block the ventilation slots on the top of the VTR.
- Use this VTR horizontally and do not place anything on the top panel.
- Cassette tape can be used only for one-side, one direction recording. Two-way or two-track recordings cannot be made.
- Cassette tape can be used for either color or black & white recording.
- Keep the VTR away from flower vases, tubs, sinks, etc. CAUTION: If liquids should be spilled into the VTR, serious damage could occur. If you spill any liquid into the VTR, remove power and consult qualified service personnel.
- Wipe the VTR with a clean, dry cloth. Never use cleaning fluids, chemicals or wax.
- Do not attempt to disassemble the VTR. There are no user serviceable parts inside.
- Refer any needed servicing to qualified service personnel.

Cleaning care for video heads

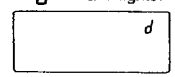
The video heads are the means by which the VTR places pictures on the tape during recording, and reads pictures from the tape during playback.
In the unlikely event that they become dirty enough to be clogged, no picture will be recorded or played back, This can easily be determined if, during playback of a known good tape, there is good sound, but no picture (picture is extremely snowy). If this is the case, have the VTR checked by qualified service personnel.

Note: We do not recommended that you attempt to clean the video heads yourself.

Dew Indication

In case of dew detection, the safety device of this VTR will operate in order to protect the cassette tape and video heads. In case of dew detection, the " d " mark in the Counter lights. Take out the cassette tape and wait until " d " mark goes out with Power Switch turned ON.

" d " mark lights.



1-2. SERVICE INFORMATION

1-2-1. Emergency Cassette Removal

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to removing cassette manually.
There are 2 methods of removing the cassette.

A. Hand Operation

1. Remove the Bottom Plate.
2. Turn the worm gear to arrow mark direction by finger as shown in Fig.S1 until the loading post move to unloading position.
3. Turn the capstan rotor clockwise to take up the tape.
4. Turn the worm gear again to eject the cassette.

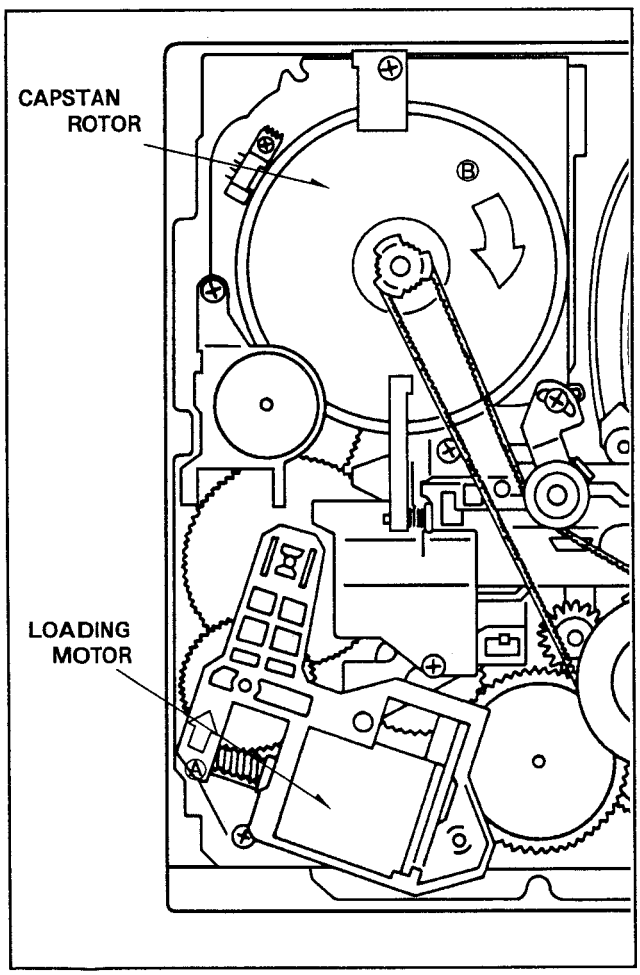


Fig. S1

B. Battery Operation

1. Remove the Bottom Plate.
2. Connect the battery (Manganese-Type (AA) 3pcs./+4.5V) to P1503 as shown in Fig.S2.
3. After moving the loading post to the unloaded position, disconnect the battery to stop the loading motor.
4. Turn the capstan rotor clockwise to take up the tape.
5. Reconnect the battery to eject the cassette.

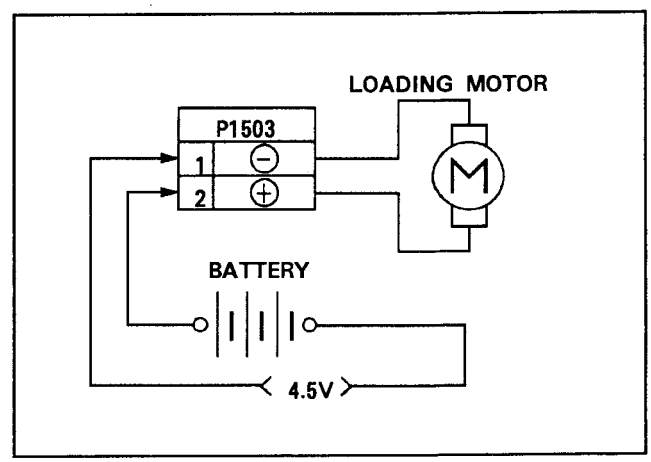


Fig. S2

1-2-2. Hour Meter Reset

1. Turn off by the power key.
2. Connect jumper wire between TP6104 and GND on the Main C.B.A.
3. Turn on unit by the power key whiles press the tracking "+" and "-" buttons simultaneously.
4. Flushing the all LCD display. (approx.4sec)
5. Hour meter reset when stop the LCD flushing.

1-2-3. No acceptance of Safety Tab Switch

Delete a jumper chip resistor (J6005) on the Main C.B.A.

1-2-4. Acceptance of LP mode recording

Delete a jumper chip resistor (J6501) on the MAIN C.B.A.

1-2-5. Auto Off Operation & Error Code

ERROR CODE	CONTENS	CAUSE CONDITION
d	CONDENSATION (DEW)	1. If it is in POWER OFF mode,the mode turns to POWER ON and "d" indication. 2. If a tape is inserted,the mode turns to middle EJECT postion and the cylinder rotates. 3. Dew condensation continues for about 120 minutes. 4. After cancelleating condensation,if a tape is inserted,the mode turns to STOP.
E-2	FRONT LOADING LOCKED	1. If the motor is locked for about 2-5 seconds during front loading, the motor is unloaded. 2. If the motor is locked for about 2-5 seconds during front unloading, the motor is unloaded after loading. Then if it is locked for about 2-5 seconds, the mode turns to AUTO OFF and "E-2" indication.
E-3	LOADING LOCKED	1. If the mode is locked for about 5 seconds during loading, it is unloaded. Then if it is loaded and locked again, the mode turns to AUTO OFF and "E-3" indication. 2. If the motor is locked for about 2-5 seconds during unloading, the mode turns to AUTO OFF and "E-3" indication.
E-4	CYLINDER LOCKED	1. If the motor is locked for about 5 seconds in cylinder rotating mode, the mode turns to AUTO OFF and "E-4" indication.
E-5	REEL LOCKED	1. If the reel rotation is locked during tape running, the motor in unloaded once. Then if the rotation is locked through the trying to load, the mode turns to AUTO OFF and "E-5" indication.

DISASSEMBLY PROCEDURE

2-1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing. When reassembling, perform the steps in the reverse order.

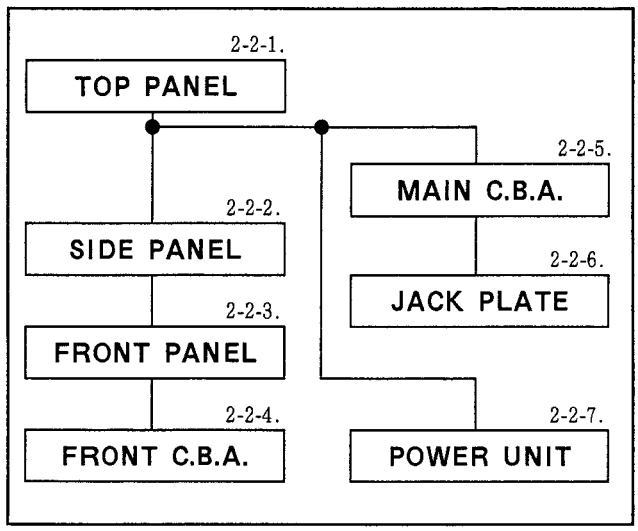


Fig. D1

2-2. DISASSEMBLY METHOD

2-2-1. Removal of the Top Panel

1. Unscrew the 2 screws (A) on the top of the unit and lift up rear portion of the Top Panel then slide it off the back of the unit.

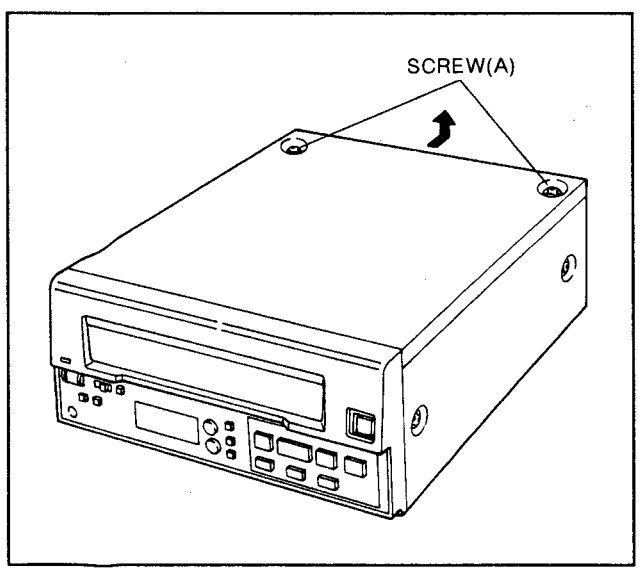


Fig. D2

2-2-2. Removal of the Side Panel

1. Unscrew 2 screws (B) on the side of the unit for each the Side Panel and remove the Side Panel.

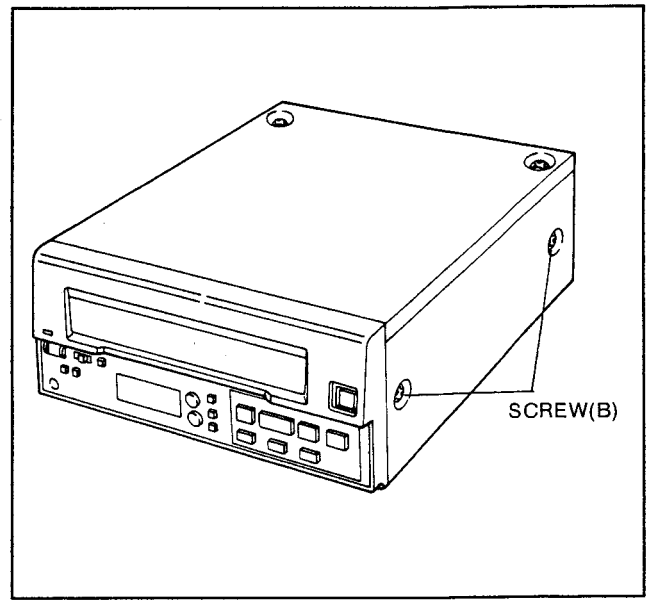


Fig. D3

2-2-3. Removal of Front Panel

1. Unlock the 4 locking tabs on the top and bottom of the Front Panel then pull the panel off the unit.

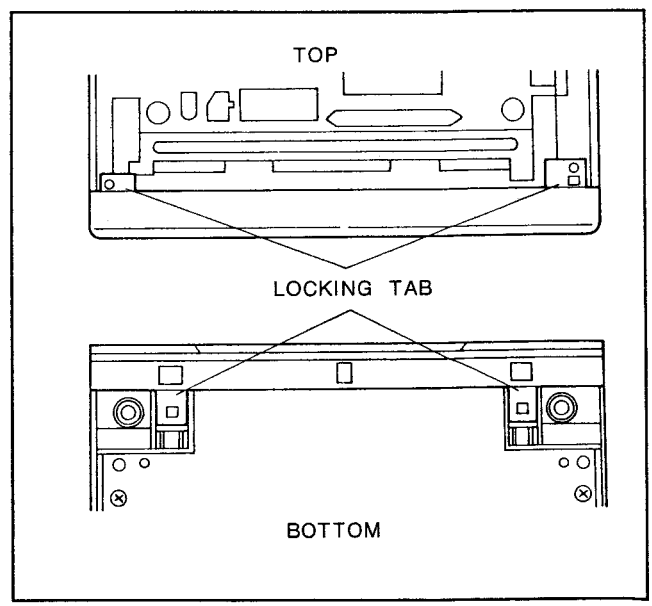


Fig. D4

2-2-4. Removal of the Front C.B.A.

1. Unscrew 2 screws (C), disconnect 2 flexible cables from the P6501 and P6502.
2. Unlock 4 locking tabs on the Front C.B.A.
3. Carefully pull the Front C.B.A. off the unit.

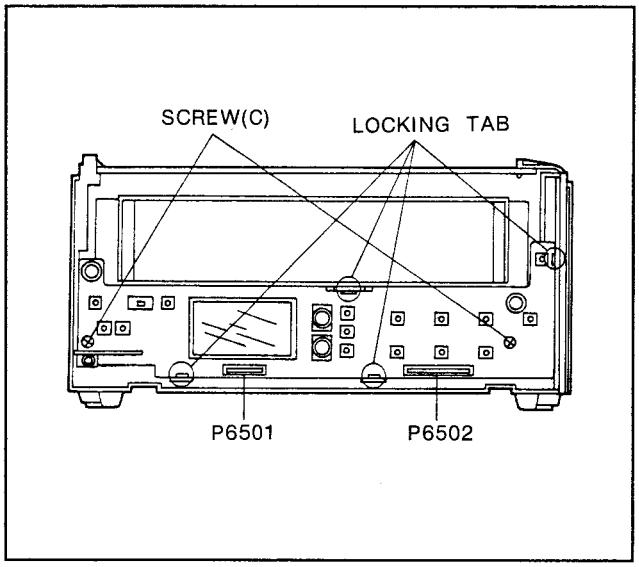


Fig. D5

2-2-5. Opening of the Main C.B.A.

1. Unscrew 3 screws (D) on the Main C.B.A.
2. Unlock 2 locking tabs and carefully open the Main C.B.A.

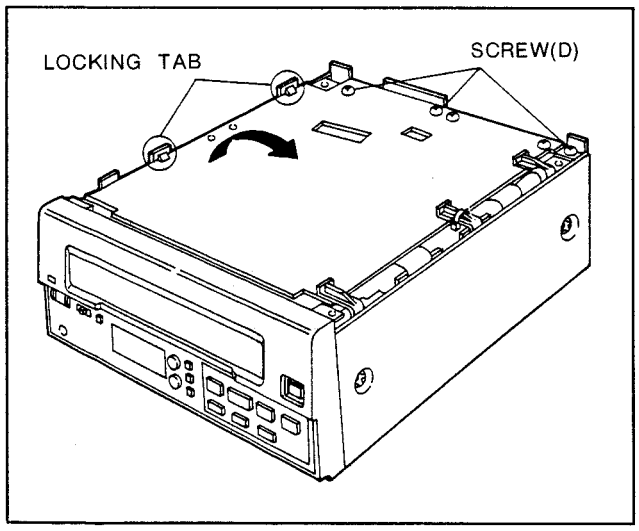


Fig. D6

2-2-6. Removal of the Jack Plate

1. Unscrew 2 screws (E) on the foil side of the Main C.B.A.
2. Carefully pull out the Rear Jack C.B.A. with the Rear Plate that connected the P6007 and P6008 on the Main C.B.A.

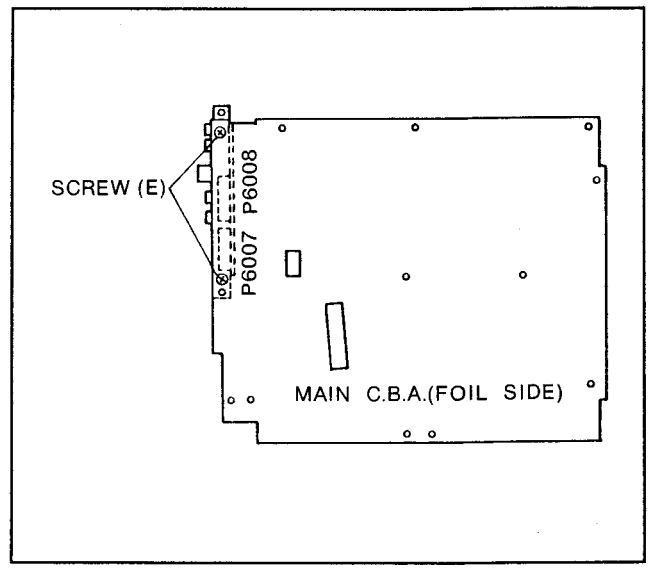


Fig. D7

2-2-7. Removal of the Power Supply Unit

1. Disconnect P1 connector in side of the Power Supply Unit.
2. Push down the locking tab and carefully slide the Power Supply Unit then lift it up from the unit.

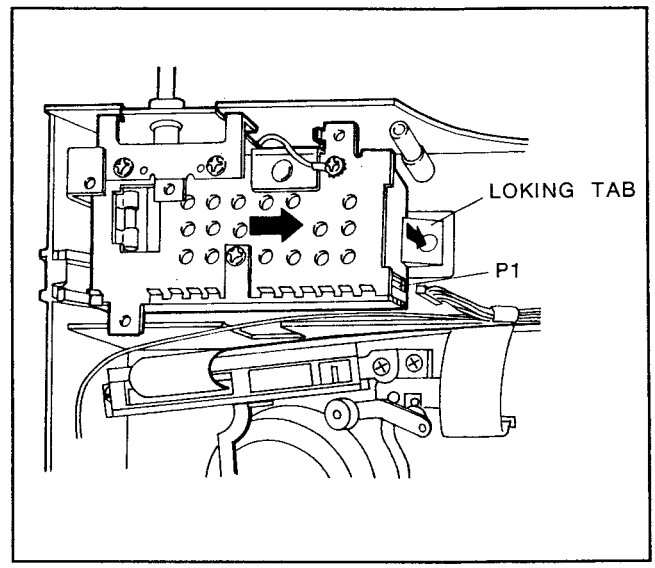
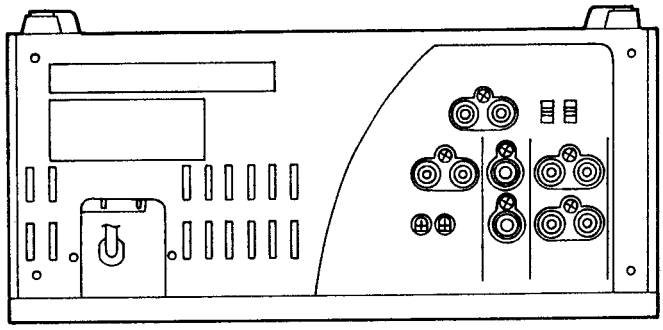
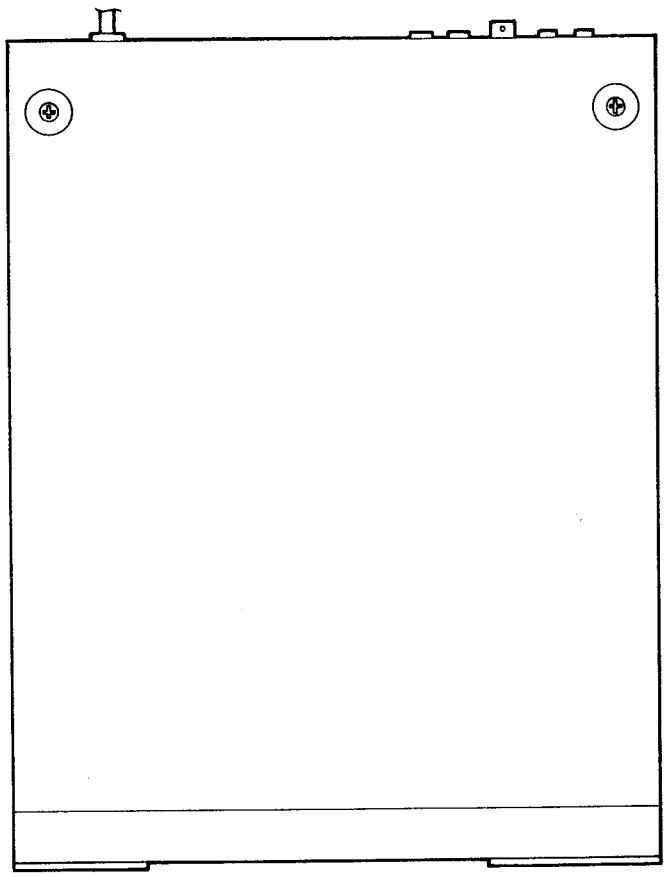
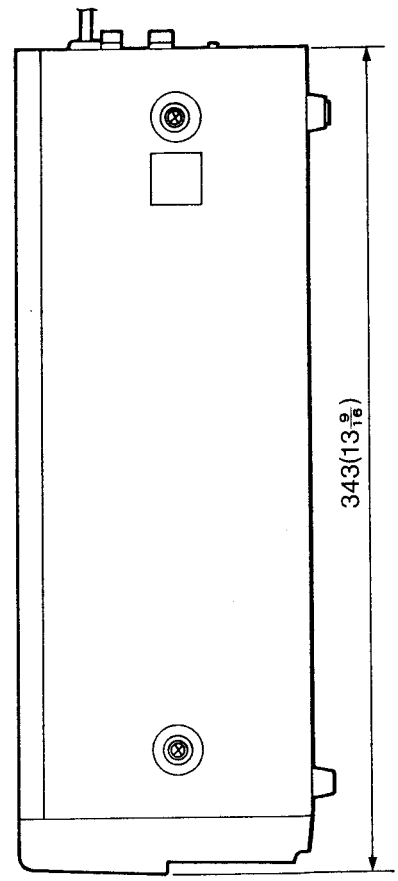


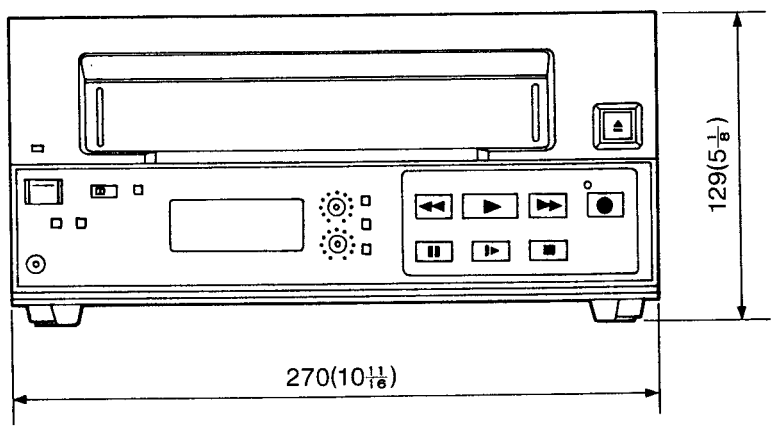
Fig. D8

DIMENSIONS









unit : mm(inch)

REGULAR MAINTENANCE

The purpose of periodic maintenance is to preserve the functioning of this machine throughout its useful life. The user or service dealer should perform these maintenance regularly to ensure that maximum utility is obtained from the machine.

The VCR is a complicated place of equipment. It contains many belts, rollers, heads etc., which become worn, and deterlorate as time goes by, causing trouble. Dust and dirt will also impede the proper functioning of the machine. In light of this, it is very important that overall maintenance be done according to the maintenance chart to maintain the functions of the VCR, and to avoid accidental problems. This maintenance should also be performed after any repairs are done on the equipment.

The VCR used for business applications requires particular attention for several reasons. The installation conditions and applications are not always the best. Long use times, or poor environmental conditions may adversely affect the lifespan and performance of the machine. Regular maintenance assures that the purchaser obtains the maximum value for his expenditure. Accordingly, the necessity of regular maintenance should be fully explained at the time of sale, as well as during after-sale repairs.

3-1. MAINTENENCE CHART

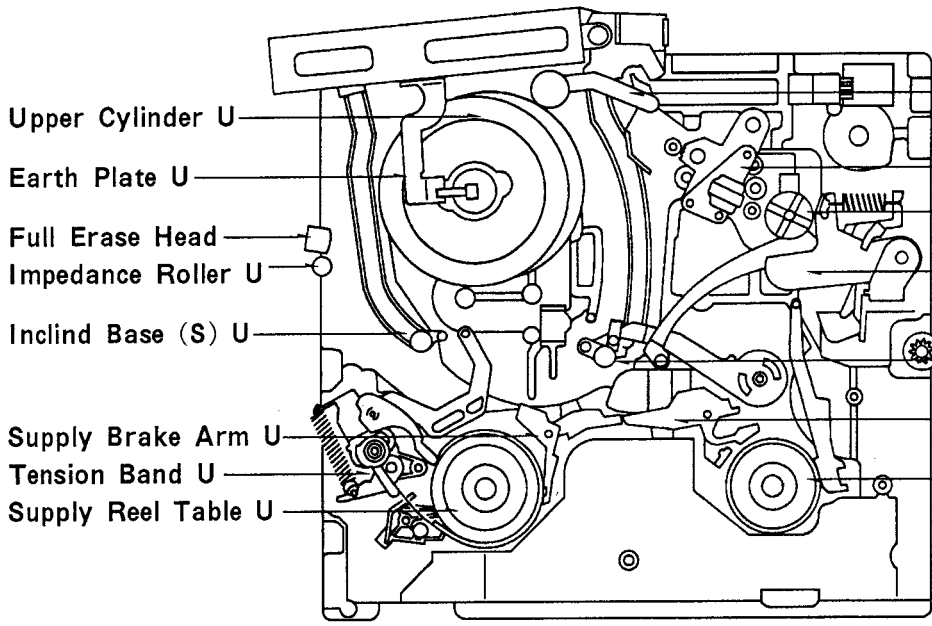
The following periodic maintenance is required to prolong the life of the machine.

Ref. No. IN P/L	Parts Name	Hour										Ref. No. IN P/L	Parts Name	Hour									
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000			500	1000	1500	2000	2500	3000	3500	4000	4500	5000
—	Tape Transporter	●	●	●	●	●	●	●	●	●	●	64 (1)	Takeup Brake Arm U				◎				◎		
20 (1)	A/C Head	●	●	●	●	●	●	●	◎	●	●	52 (1)	Temsopm Band U				◎				◎		
71 (1)	Upper Cylinder	●	◎	●	◎	●	◎	●	◎	●	◎	113 (2)	Timing Belt				◎				◎		
70 (1)	Cylinder U	●	●	●	●	●	●	●	◎	●	●	62 (1)	Earth Plate U								◎		
60 (1)	Supply Reel Table U	●	●	●	●△	●	●	●	●△	●	●	12 (1)	FE Head	●	●	●	●	●	●	●	◎	●	●
61 (1)	Takeup Reel Tubls U	●	●	●	●△	●	●	●	●△	●	●	127 (2)	Mode Switch								◎		
106 (2)	Capstan Roter U	●	●△	●	●△	●	●△	●	◎△	●	●△	108 (2)	Main Cam Gear				×				×		
105 (2)	Capstan Housing U								◎			40 (1)	Inclined (S) U				▲				▲		◎
49 (1)	Pressure Roller U				◎				◎			42 (1)	Inclined (T) U				▲				▲		◎
63 (1)	Supply Brake Arm U				◎				◎			121 (2)	Loading Motor U				◎				◎		
15 (1)	Impedance Roller U	●	●	●	●	●	●	●	◎	●	●	9 (1)	Cleaner Arm U				◎				◎		
128 (2)	SS Brake Base U				◎				◎														

*** NOTE:**

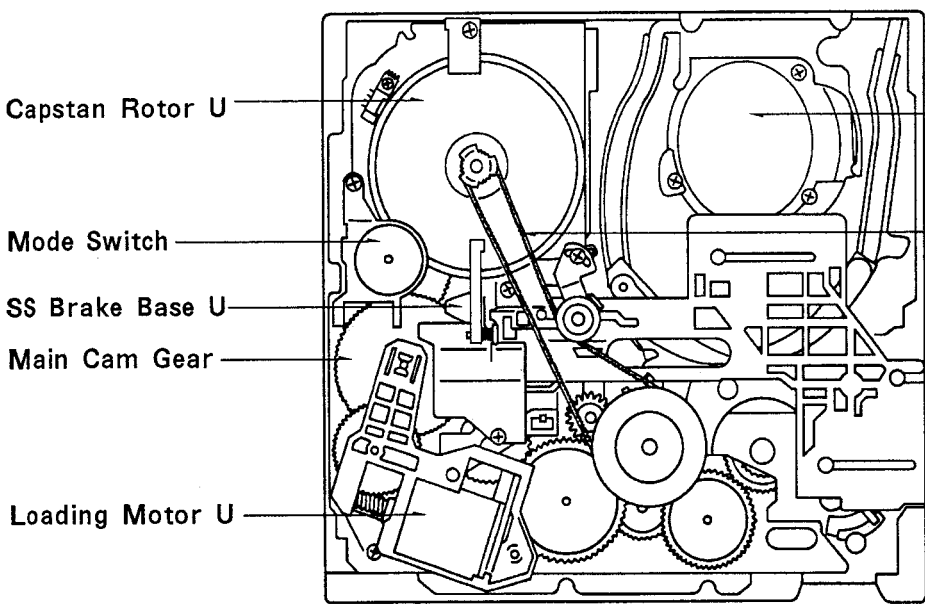
Symbol	Maintenance	Requirement	Remark
●	Cleaning	Ethyl-alcohol or Cleaning Liquid (Purchase locally)	Wipe dirt from the parts using soft cloth impregnated with Ethyl-Alcohol. Note: When cleaning rubber parts, avoid using excessive alcohol since it may accelerate deterioration of these parts. After cleaning with alcohol, wipe the alcohol quickly and thoroughly.
◎	Replacement	———	———
△	Lubrication	High Quality Spindle Oil (Purchase locally)	Supply one or two drops of oil.
▲	Greasing	Molytone Grease (MOR265)	Wipe the old grease and apply new grease.
×	Greasing	S.C.R. Grease (VFK0680)	Wipe the old grease and apply new grease.

3-2. PARTS LOCATION



TOP VIEW

BOTTOM VIEW



ELECTRICAL ADJUSTMENT PROCEDURES

4-1. TEST EQUIPMENT

To perform the electrical adjustment completely the following equipments are required.

1. VTVM (Vacuum Tube Volt Meter)
   Capacity: 0.001 to 50V
2. DVM (Digital Volt Meter)
   Capacity: 0.001 to 50V
3. Dual-Trace Oscilloscope (with probes)
   Capacity: 0.005 to 50V/div, DC to 30MHz
4. Frequency Counter
   Capacity: 0 to 10MHz
5. Sine Wave Signal Generator(RC Oscillator)
   Capacity: 0 to 10MHz
6. Video Signal Generator (Composite)
7. Spectrum analyzer
8. Color Monitor TV
9. Alignment Tape (VFM8080HQFP)

4-2. ELECTRICAL ADJUSTMENT PROCEDURES

HOW TO READ THE ADJUSTMENT PROCEDURE TABLE

BOARD	MAIN C.B.A.
TP	TP3502(F-2)
ADJ.	VR2002(A-3)
TAPE	ALIGNMENT TAPE
INPUT	COLOR BAR
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC.	T=6.5±0.5H

BOARD: Adjustment position of Print Circuit Board.
TP: Connection point(Test Point) of measuring equipment
* ( ) shown TP location on the board.
ADJ.: Adjustment component
* ( ) shown VR location the board.
TAPE: Tape for adjustment.
INPUT: Supply a signal for adjustment.
MODE: Mode of VTR.
Example:REC → PLAY is recording signal and playback the portion just recorded.
M.EQ: Measuring equipment.
SPEC.: Specification for adjustment.

4-2-1. PG SHIFTER ADJ.

BOARD	MAIN C.B.A.
TP	TP3502(F-3),TP6105(H-4)
ADJ.	VR2002(A-3)
TAPE	ALIGNMENT TAPE
INPUT	COLOR BAR
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC.	T=6.5±0.5H

Note: *Tape interchangeability adjustment should be completed before this adjustment.*

1. Playback the 2nd portion of the alignment tape.
2. Connect the oscilloscope to TP3502 for CH1 and TP6105 for CH2.
3. Adjust VR2002 so that T=6.5 ± 0.5H as shown in Fig. E1.

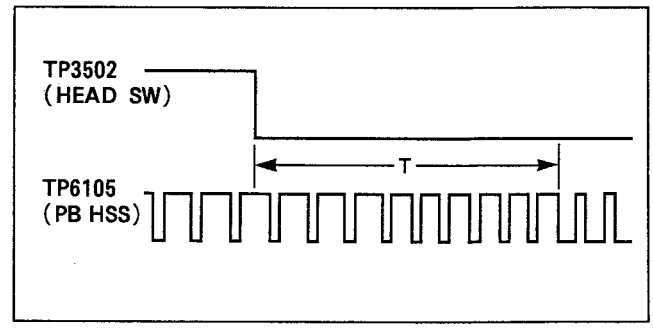


Fig.E1

4-2-2. SLOW FREE RUN ADJ.

BOARD	MAIN C.B.A.
TP	TP6004(A-4)
ADJ.	VR2001(A-3)
TAPE	ALIGNMENT TAPE
INPUT	COLOR BAR
MODE	PLAY/PAUSE(STILL)
M.EQ	FREQUENCY COUNTER
SPEC.	F=648±5Hz

1. Connect the jumper wire between TP6002(B-8) and TP6003(B-8) on the MAIN C.B.A.
2. Playback the 2nd portion of the alignment tape.
3. Connect the low frequency counter to TP6004.
4. Adjust VR2001 so that F=648 ± 5Hz.
5. Remove a jumper wire when completed this adjustment.

4-2-3. SLOW TRACKING ADJ.

BOARD	MAIN C.B.A.
TP	VIDEO OUT
ADJ.	2H:VR2006(A-3),6H:VR2004(B-4)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	REC → PLAY
M.EQ	MONITOR TV
SPEC.	NO NOISE BAR APPEAR ON MONITOR TV

Note: *SLOW FREE RUN adjustment should be completed before this adjustment.*

1. Record the color bar signal a few minute in the 2H and 6H tape speed mode.
2. Set the tracking to fix position that press the tracking buttons (+)/(-) simultaneously.
3. Place the unit in SLOW mode.
4. Adjust VR2006(2H) and VR2004(6H) until noise bar disappear on the monitor screen.

4-2-4. V LOCK ADJ.

BOARD	MAIN C.B.A.
TP	VIDEO OUT
ADJ.	2H:VR2008(B-4),6H:VR2007(B-5)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	REC → PLAY/PAUSE
M.EQ	MONITOR TV
SPEC.	NO V-DANCING ON MONITOR TV

Note: *SLOW TRACKING adjustment should be completed before this adjustment.*

1. Set the V LOCK volume VR6901(2H) and VR6902(6H) to center position on the rear jack panel.
2. Record the color bar signal a few minute in the 2H and 6H tape speed mode.
3. Place the unit in STILL mode at 2H recorded portion.
4. Adjust VR2008 so that the V-dancing does not appear on monitor screen.
5. Place the unit in STILL mode at 6H recorded portion.
6. Adjust VR2007 so that the V-dancing does not appear on monitor screen.

4-2-5. Y SEPARATION ADJ.

BOARD	MAIN C.B.A.
TP	TP3001(H-8)
ADJ.	VR3003(G-8),VR3006(G-7)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	REC or STOP
M.EQ	OSCILLOSCOPE
SPEC.	A=LESS THAN 10mVp-p

1. Place the unit in recording or stop mode with the color bar signal.
2. Connect TP3001 to the oscilloscope.
3. Adjust VR3003 and VR3006 mutually so that the chrome components becomes minimum as much as possible.

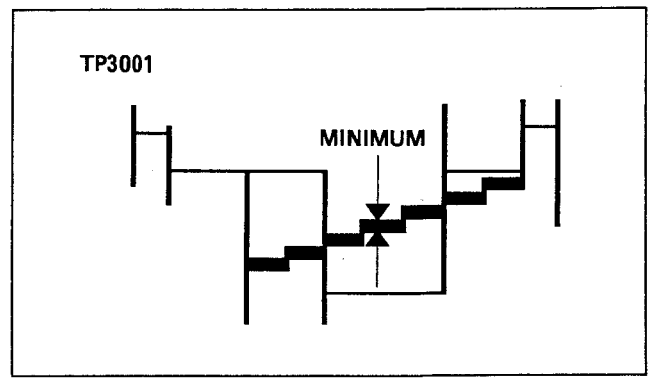


Fig. E2

4-2-6. AGC LEVEL ADJ.

BOARD	MAIN C.B.A.
TP	VIDEO OUT
ADJ.	VR3001(D-6)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	REC or STOP
M.EQ	OSCILLOSCOPE
SPEC.	Y=1.0±0.05Vp-p

Note: *Y SEPARATION adjustment should be completed before this adjustment.*

1. Set the AGC SW to ON side.
2. Place the unit in the recording or stop mode with the color bar signal.
3. connect Video out to the oscilloscope with a 75ohm termination.
4. Adjust VR3001 so that video level becomes 1.0 ± 0.05 Vp-p.

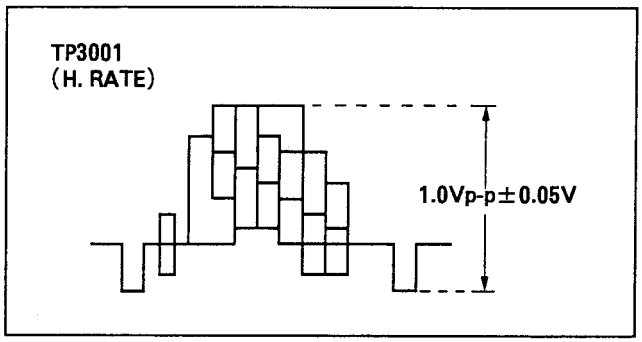


Fig. E3

4-2-7. Y LEVEL ADJ.

BOARD	MAIN C.B.A.
TP	VIDEO OUT
ADJ.	VR3004(G-4)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	REC or STOP
M.EQ	OSCILLOSCOPE
SPEC.	Y=1.0±0.05Vp-p

Note: *AGC LEVEL adjustment should be completed before this adjustment.*

1. Set the AGC SW to OFF side.
2. Place the unit in recording or stop mode with the color bar signal.
3. Connect video out to the oscilloscope with a 75ohm termination.
4. Adjust VR3004 so that the Y level becomes 1.0 ± 0.05 Vp-p.
5. Set the AGC SW to ON side when completed this adjustment.

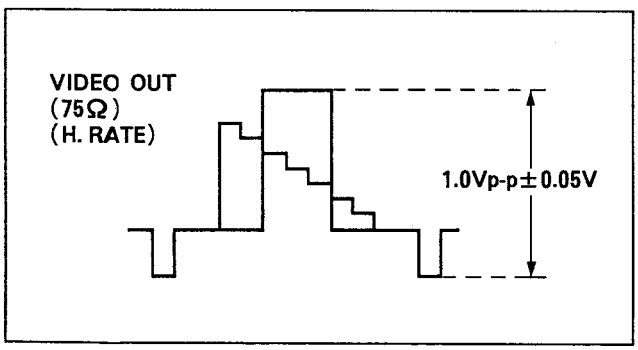


Fig. E4

4-2-8. YNR BALANCE ADJ.

BOARD	MAIN C.B.A.
TP	TP3004(F-4)
ADJ.	VR3501(C-7)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	REC
M.EQ	OSCILLOSCOPE
SPEC.	A=LESS THAN 50mVp-p

1. Place the unit in recording mode with color bar signal.
2. Connect TP3004 to the oscilloscope.
3. Adjust VR3501 so that the white portion becomes minimum as much as possible.

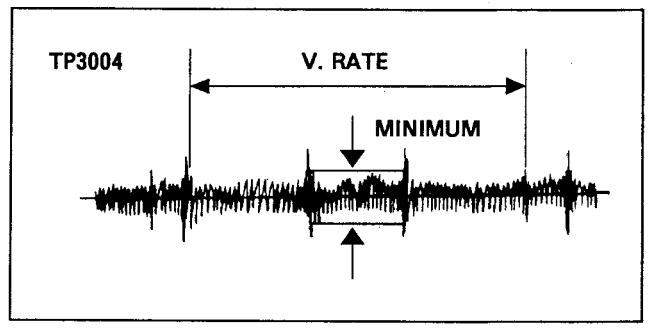


Fig. E5

4-2-9. VIDEO RECORDING CURRENT ADJ.

BOARD	MAIN C.B.A.
TP	TP507,TP508(HEAD AMP)
ADJ.	Y:VR3505(D-3),C:VR3504(E-3)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	REC
M.EQ	OSCILLOSCOPE
SPEC.	Y=140±5mVp-p, C=40±2mVp-p

Note: *The oscilloscope probe should be use under 5 feet longer cable and set 10:1.*

1. Place the unit in recording(2H) mode with color bar signal.
2. Connect the oscilloscope between TP507(HOT) and TP508(GND) on the HEAD AMP C.B.A.
3. Turn the VR3505 fully clockwise from foil side.
4. Adjust VR3504 so that the cyan level becomes 40 ± 2 mVp-p.
5. Adjust VR3505 so that the sync level becomes 140 ± 5 mVp-p.

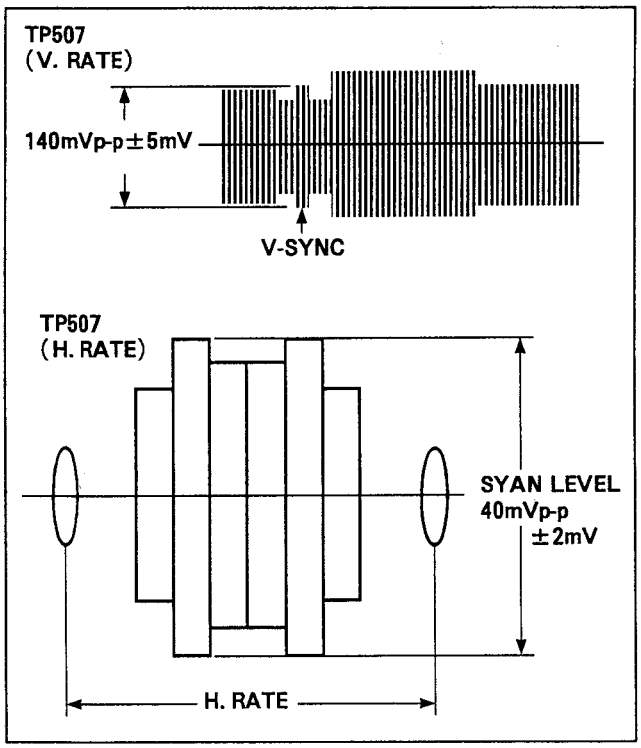


Fig. E6

4-2-10. CNR ADJ.

BOARD	MAIN C.B.A.
TP	TP3002(F-6)
ADJ.	VR3002(G-5),VR3007(G-6)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	REC → PLAY
M.EQ	OSCILLOSCOPE
SPEC.	A=LESS THAN 550mVp-p

Note: *YNR BALANCE adjustment should be completed before this adjustment.*

1. Record the color bar signal a few minute and playback the just recorded portion.
2. Connect TP3002 to the oscilloscope.
3. Adjust VR3002 and VR3007 mutually so that chrome components becomes minimum as much as possible.

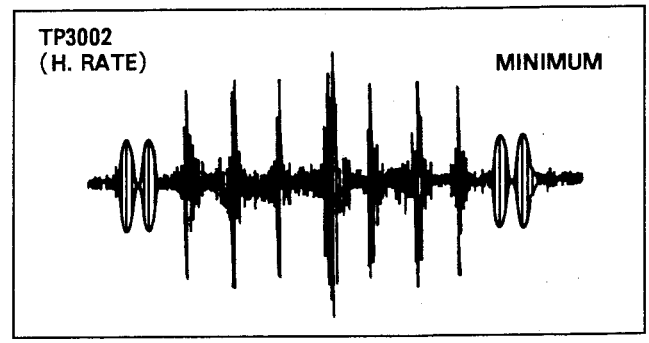


Fig. E7

4-2-11. VIDEO PLAYBACK LEVEL ADJ.

BOARD	MAIN C.B.A.
TP	VIDEO OUT
ADJ.	VR3005(E-4)
TAPE	BLANK TAPE
INPUT	COLOR BAR
MODE	REC → PLAY
M.EQ	OSCILLOSCOPE
SPEC.	Y=1.0±0.05Vp-p, C=0.6±0.1Vp-p

Note: *CNR adjustment should be completed before this adjustment.*

1. Connect the oscilloscope to video out with a 75 ohm termination.
2. Record the color bar signal a few minute and playback just recorded portion.
3. Adjust VR3005 so that the video level becomes 1.0 ± 0.05Vp-p.
4. Confirm the cyan level should be 0.6 ± 0.1 Vp-p.

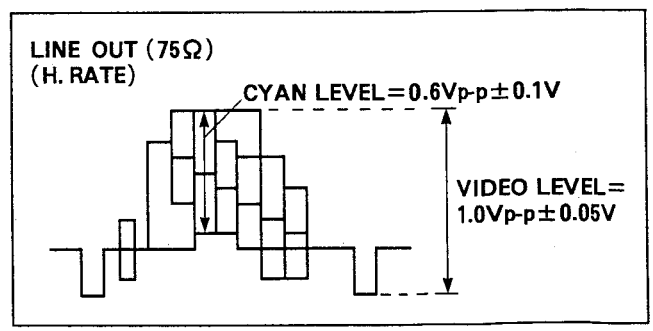


Fig. E8

4-2-12. AUDIO E-E LEVEL ADJ.

BOARD	MAIN C.B.A.
TP	AUDIO OUTPUT
ADJ.	CH1:VR4002(I-3),CH2:VR4003(I-4)
TAPE	
INPUT	1kHz, -8dB SINE WAVE SIGNAL
MODE	STOP
M.EQ	VTVM
SPEC.	OUTPUT LEVEL = -8 ± 0.5dBV

1. Set the audio out select switch to Hi-Fi mode.
2. Hi-Fi Level VR to center position.
3. Supply sin wave signal to audio input.
4. Connect the VTVM to audio output.
5. Adjust VR4002 so that the audio output level becomes -8 ± 0.5dBv.
6. Adjust VR4003 so that the audio output level becomes -8 ± 0.5dBv.

4-2-13. AUDIO LEVEL METER ADJ.

BOARD	MAIN C.B.A.
TP	CH1:TP4006(I-1),CH2:TP4005(I-3)
ADJ.	CH1:VR4004(J-1),CH2:VR4005(J-2)
TAPE	
INPUT	1kHz, -8dB SINE WAVE SIGNAL
MODE	STOP
M.EQ	DVM
SPEC.	1.55±0.05V

1. Set the audio out select switch to Hi-Fi mode.
2. Hi-Fi Level VR to center position.
3. Supply 1kHz, -8dBV sine wave signal to audio input.
4. Connect the Digital Volt Meter to TP4006.
5. Adjust VR4004 so that DC level becomes 1.55 ± 0.05V.
6. Connect the Digital Volt Meter to TP4007.
7. Adjust VR4005 so that DC level becomes 1.55 ± 0.05V.
8. Confirm display light "+2dB" to "-5dB" when set the audio select SW to L → R → NORMAL mode. Also, Level Meter difference between CH1 and CH2 within 1 segment on the display.

4-2-14. NORMAL AUDIO BIAS CURRENT ADJ.

BOARD	MAIN C.B.A.
TP	HOT:TP4001(I-1),COLD:TP4002(I-2)
ADJ.	VR4001(I-1)
TAPE	BLANK TAPE
INPUT	
MODE	REC
M.EQ	VTVM
SPEC.	4.0 ± 0.1mVrms

1. Place the unit in recording mode without audio signal.
2. Connect the VTVM to TP4001(HOT) and TP4002(GND).
3. Adjust VR4001 so that level becomes 4.0 ± 0.1 mVrms.

4-2-15. NORMAL AUDIO PLAYBACK GAIN ADJ.

BOARD	MAIN C.B.A.
TP	AUDIO OUT
ADJ.	VR4006(I-2)
TAPE	BLANK TAPE
INPUT	1kHz, -8dB SINE WAVE SIGNAL
MODE	REC → PLAY
M.EQ	VTVM
SPEC.	EE ± 1dB

1. Set the audio out select switch to Normal mode.
2. Level VR to center position.
3. Place the unit in recording mode with sine wave signal.
4. Connect the VTVM to audio output.
5. Playback the just recorded portion.
6. Adjust VR4006 so that playback level becomes EE level ± 1 dB.

4-2-16. FM AUDIO CARRIER FREQUENCY ADJ.

BOARD	AUDIO C.B.A.
TP	TP4004(H-3)
ADJ.	CH1:VR4501(E-1),CH2:VR4505(D-2)
TAPE	
INPUT	NO SIGNAL
MODE	STOP
M.EQ	SPECTRUM ANALYZER
SPEC.	fL=1.3MHz±10KHz fR=1.7MHz±10KHz

1. Ground the Audio inputs (CH1 & CH2)
2. Connect the spectrum analyzer to TP4004 on MAIN C.B.A.
3. Adjust VR4501 so that the frequency of spectrum analyzer becomes 1.3MHz ± 10KHz.
4. Adjust VR4502 so that the frequency of spectrum analyzer becomes 1.7MHz ± 10KHz.

4-2-17. FM AUDIO DEVIATION ADJ.

BOARD	AUDIO C.B.A.
TP	TP4004(H-3)
ADJ.	CH1:VR4502(E-2),CH2:VR4504(C-3)
TAPE	BLANK TAPE
INPUT	1KHz, -8dB SINE WAVE SIGNAL
MODE	REC
M.EQ	SPECTRUM ANALYZER
SPEC.	fW=100 ± 5 kHz

<Set up>
Hi-Fi LEVEL VR:Center position
Spectrum analyzer: SCAN TIME:10ms/div
BAND WIDTH:10kHz
DISPERSION:20kHz/div

1. Supply a 1kHz sine wave signal to the Audio input.
2. Connect the spectrum analyzer to TP4004 on MAIN C.B.A. and set the center frequency to 1.3MHz.
3. Adjust VR4502 so that the width of the fW portion becomes 100 ± 5kHz.
4. Set the center frequency to 1.7MHz.
5. Adjust VR4504 so that the width of the fW portion becomes 100 ± 5 kHz.

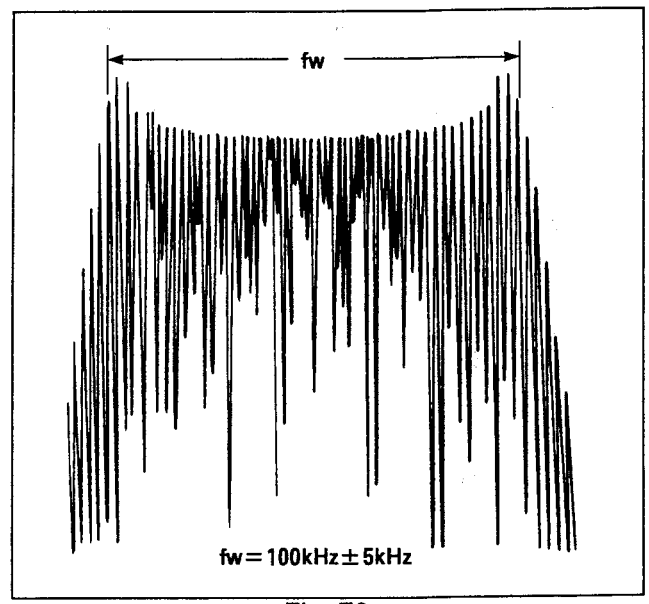


Fig. E9

4-2-18. FM AUDIO BPF ADJ.

BOARD	AUDIO C.B.A.
TP	TP4005(I-3)
ADJ.	VR4503(D-2)
TAPE	BLANK TAPE
INPUT	
MODE	REC → PLAY
M.EQ	OSCILLOSCOPE
SPEC.	ENVELOPE LEVEL: MAXIMUM

1. Connect the oscilloscope to TP4005 on MAIN C.B.A.
2. Place the unit in recording mode without audio signal.
3. Playback just recorded portion.
4. Adjust VR4503 so that the envelope level becomes maximum as much as possible.

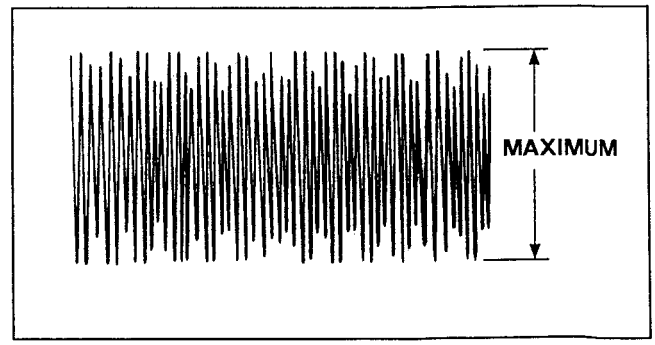


Fig.E10

4-3. MECHANICAL ADJUSTMENT INFORMATION

This section contain the supplementary information of Mechanical Adjustment Procedure for K-Mechanisum.
Please refer to the K-Mechanisum service manual (Order No. VSD9401M242) .

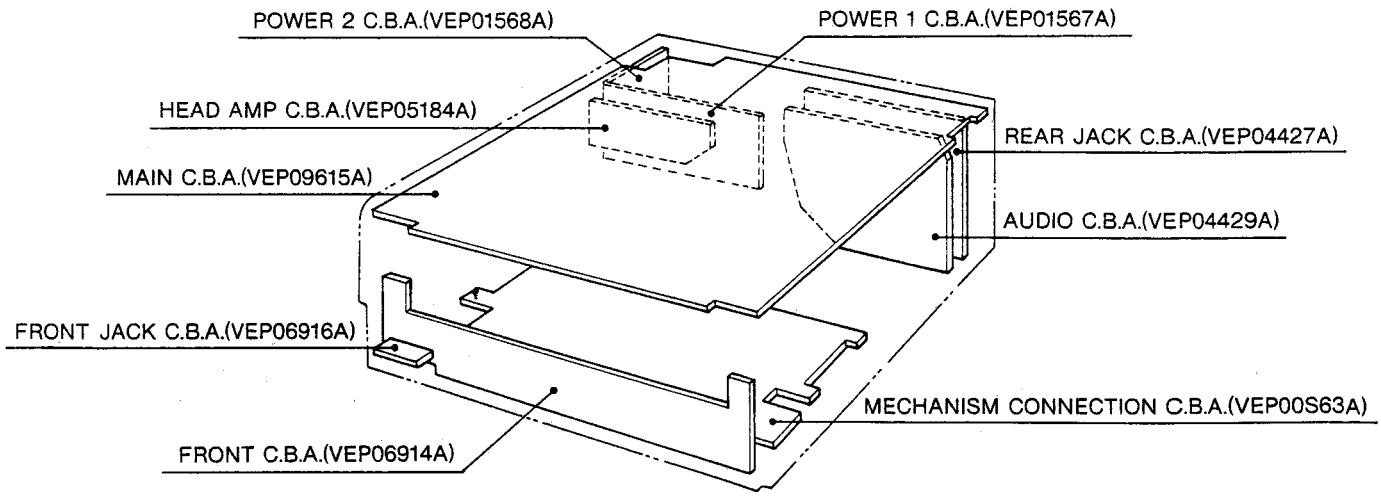
1. TEST POINT

INTERCHANGEABILITY ADJUSTMENT	VIDEO RF SIGNAL	TP507,TP508 (GND) HEAD AMP C.B.A.
	HEAD SWITCHING PULSE	TP3502 MAIN C.B.A.
TRACKING FIX POISION (Inhibit of Auto Tracking)	JUMPER SHORT	TP6002 and TP6003 MAIN C.B.A.

2. SPECIFICATION

3-8. BACK TENSION	22.5 ~ 27.5 g
3-11. FG GAP	0.15 ± 0.04mm
3-12. PINCH PRESSING FORCE	1140 ± 250 g

CIRCUIT BOARD LAYOUT



BLOCK DIAGRAMS

SCHEMATIC DIAGRAMS
AND
CIRCUIT BOARDS

NOTE : How to read the Schmatic diagram.

MIJISSO ⇒ No circuits construct for AG-5210.

D182 ONLY ⇒ AG-5210 used this circuits.

D182,D184 ONLY ⇒ AG-5210 used this circuits.

D184 ONLY ⇒ No circuits construct for AG-5210.

D183 ONLY ⇒ No circuits construct for AG-5210.

* mark ⇒ Parts value, see table in the schematic diagram.

(EX:)

	D182
R2018	10K
R2019	----------

10KΩ

No part

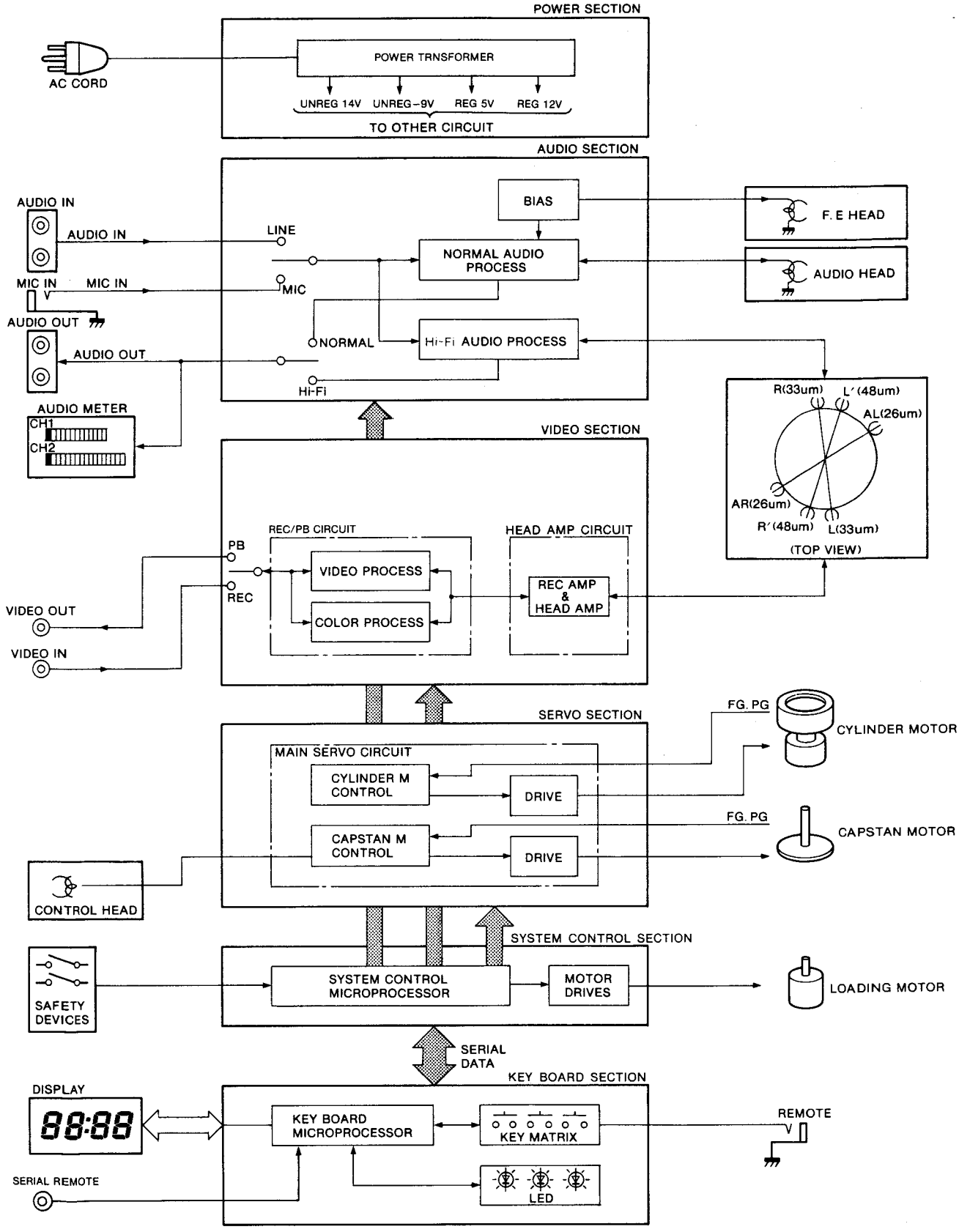
NOTE : Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since this drawing was prepared.

5-1. ABBRIVIATIONS

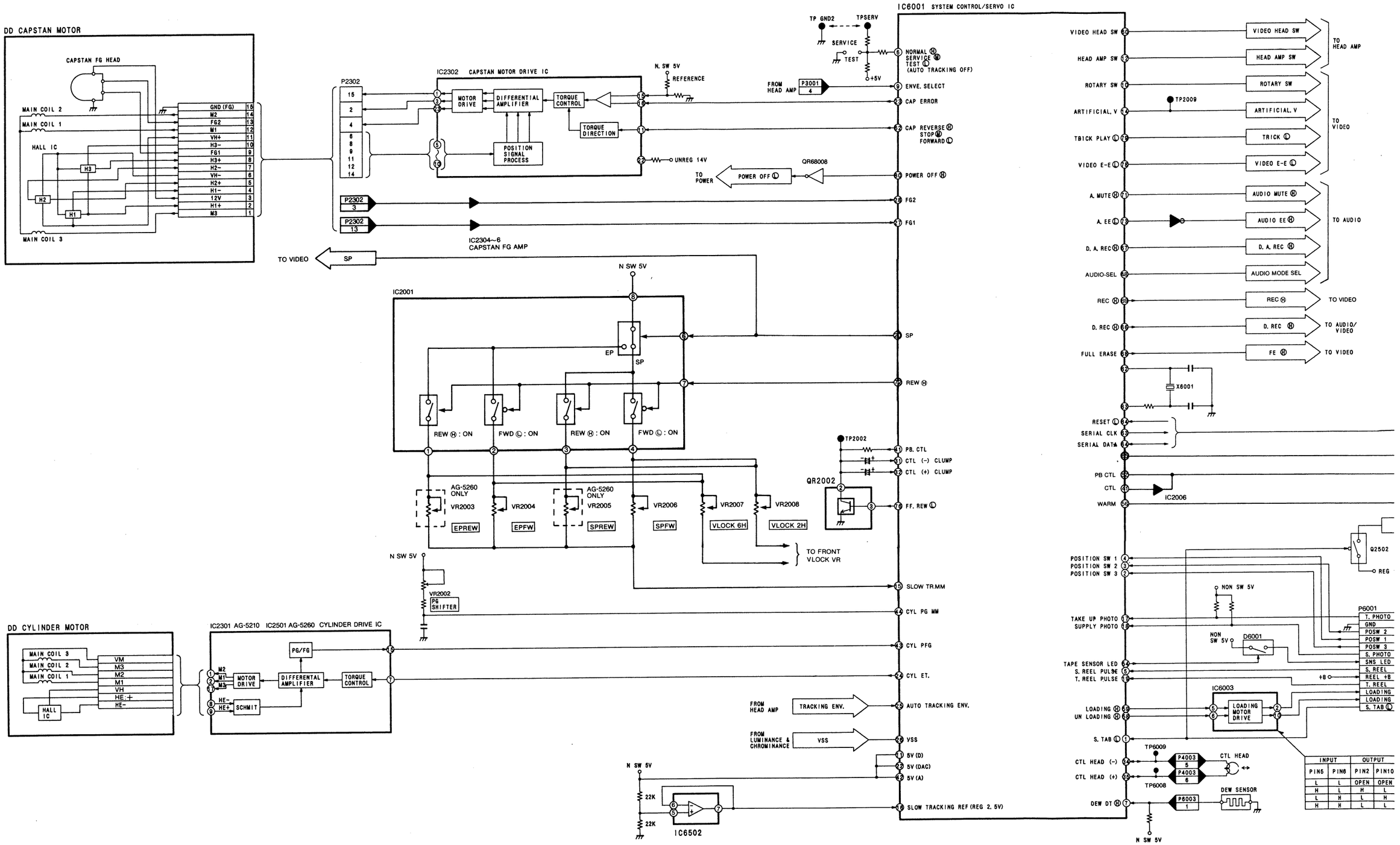
A MODE SEL	AUDIO MODE SELECT
A.DUB.P(L)	AUDIO DUBBING PAUSE (L)
A.E.HEAD	AUDIO ERASE HEAD
A.HEAD(R)	AUDIO HEAD (REC)
A.HEAD(W)	AUDIO HEAD (PLAY)
A_ HSW	AUDIO HEAD SWITCING PULSE
AE	AUDIO ERASE
AGC	AUTO GAIN CONTROL
AGC ON(H)	AUTO GAIN CONTROL ON (H)
AL(AUDIO)	AUDIO L-CH SIGNAL
ANALOG REM IN	ANALOG REMOTE SIGNAL IN
ANALOG_ IN	ANALOG REMOTE SIGNAL IN
AR(AUDIO)	AUDIO R-CH SIGNAL
ART_ V	ARTIFICAL VERTICAL SYNC SIGNAL
AUDIO EE(H)	AUDIO EE MODE (H)
AUTO OFF OUT	AUTO OFF SIGNAL OUT
BACK SYS 5V	BACK UP 5V FOR SYSTEM CONTROL CIRCUIT
BACK UP 5V	BACK UP 5V DC
BIAS	AUDIO BIAS SIGNAL
CAP ET	CAPSTAN ERROR TORQUE CONTROL
CAP FG1	CAPSTAN FG1 PULSE
CAP FG2	CAPSTAN FG2 PULSE
CAP RSF	CAPSTAN REV/ STOP/ FWD
CAP VM	CAPSTAN DRIVE VOLTAGE
COR	CORREATION SIGNAL
CTL OUT	CONTROL SIGNAL OUT
CTL(+)	CONTROL HEAD (+)
CTL(-)	CONTROL HEAD (-)
CUL	CAPSTAN SPEED CONTROL SIGNAL (H,M,High Impedance)
CYL ET	CYLINDER ERROR TORQUE CONTROL
CYL PFG	CYLINDER PG/ FG PULSE
D FM REC (L)	DELAIED FM REOCRDING (L)
D REC (H)	DELAIED RECORDING (H)
DEW SENSE	DEW SENSOR
E_ REC_ 5V	EXCEPT RECORDING 5V
EDIT_ ON(H)	EDIT ON (H)
EE(H)	RECORDING (H)
ENV_ SEL	RF ENVELOPE SELECT
ENVE.OUT	RF ENVELOPE SIGNAL OUT
FE(1)	FULL ERASE(1)
FE(2)	FULL ERASE(2)
FLY E	FLYING ERASE
FM MUTE(H)	FM AUDIO MUTE (H)
H_ A_ SW	HEAD AMP SWITCING PULSE
H_ METER_ RST	HOUR METER RESET
HIFI REC(L)	FM AUDIO RECORDING(L)
HSS	HORIZONTAL SYNC SIGNAL
HSW	HEAD SWITCING PULSE
L(EP)	VIDEO L- CH FOR EP MODE
L(SP)	VIDEO L- CH FOR SP MODE
LOADING M(+)	LOADING MOTOR (+)
LOADING M(-)	LOADING MOTOR (-)
M GND	MOTOR GND
METER_ CH1	AUDIO METER CH1
METER_ CH2	AUDIO METER CH2
MIC GND	MICROPHONE GND
MIC IN	MICROPHONE SIGNAL INPUT
MIC(H)	MICROPHONE SIGANL REC (H)
MIX OUT	AUDIO CH1/ CH2 SIGNAL MIX OUTPUT
NOR REC(L)	NORMAL AUDIO RECORDING(L)
PB LEVEL	PLAYBACK SIGNAL LEVEL
PB SIGNAL	PLAYBACK VIDEO SIGNAL
PFG	PG/ FG
POS SW1~3	MECHANISUM POSITION SWITCH
POWER OFF(L)	AC POWER OFF (L)
R(EP)	VIDEO R- CH FOR EP MODE
R(SP)	VIDEO R- CH FOR SP MODE
REC GATE(L)	RECORDING GATE (L)
REC_ C	RECORDING CHROMINANCE SIGNAL
REC_ Y	RECORDING LUMINANCE SIGNAL
REC(H)	RECORDING (H)
REEL + B	REEL PHOTE SENSOR DC
RF_ C	RF CHROMINANCE SIGNAL
RF_ OUT	RF SIGNAL OUT
RF_ Y	RE LUMINANCE SIGNAL
RF_ Y_ IN	RF LUMINANCE SIGNAL INPUT
RE_ Y_ OUT	RF LUMINANCE SIGNAL OUTPUT
ROTARY SW	ROTARY SWITCH
S NONSW 5V	NON SWITCING 5V FOR SYSTEM CONTROL CIRCUIT
S PHOTO	SUPPLY REEL PHOTO SENSOR
S REEL	SYPPLY REEL PULSE
S TAB SW	SAFETY TAB SWITCH
S VHS(H)	SVHS SIGNAL DETECT (H)
SCK F	SERIAL CLOCK FOR FRONT

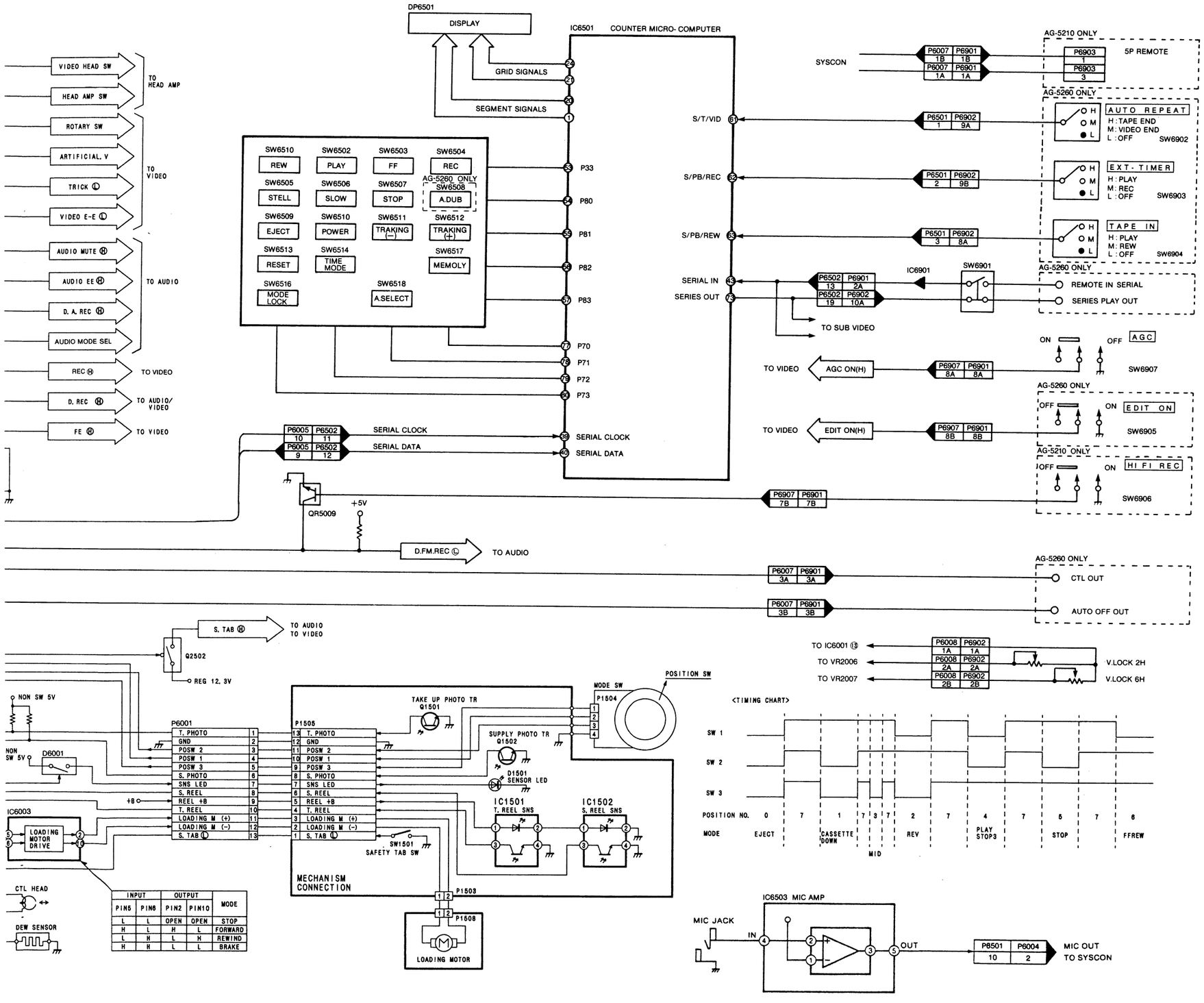
SDA F	SERIAL CLOCK FOR FRONT
SERIAL IN	SERIAL REMOTE SIGNAL IN
SERIAL OUT	SERIAL REMOTE SIGNAL OUT
SFR	MOTOR DIRCTION STOP/ FWD/ REV
SNS LED	SENSOR LED
SP/ EP	SP/ EP MODE SELECT
T PHOTO	TAKE UP PHOTO TRANSISTOR
T REEL	TAKE UP REEL PULSE
TRAC ENV	TRACKING ENVELOPE
TRICK (L)	STILL,SEARCH MODE (L)
UNREG −9V	UNREGULATOR −9V
UNREG 14V	UNREGULATOR 14V
V LOCK 2H	VERTICAL LOCK 2H SPEED
V LOCK 6H	VERTICAL LOCK 6H SPEED
V NONSW 5V	NON SWITCHING 5V FOR VIDEO
V SYNC	VERTICAL SYNC SIGNAL
VIDEO EE(L)	VIDEO RECORDING MODE (L)
VR CH1	AUDIO CH1 RECORDING VOLUME
VR CH2	AUDIO CH2 RECORDING VOLUME
YNR_ IN	LUMINANCE NOISE REDUCTION SIGNAL IN
YNR_ OUT	LUMINANCE NOISE REDUCTION SIGNAL OUT

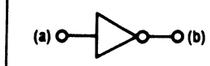
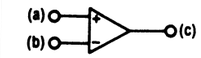
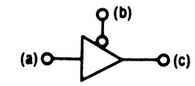
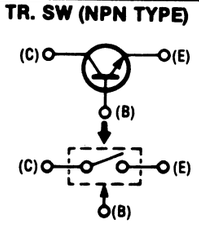
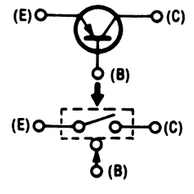
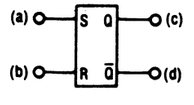
5-2. OVERALL BLOCK DIAGRAM



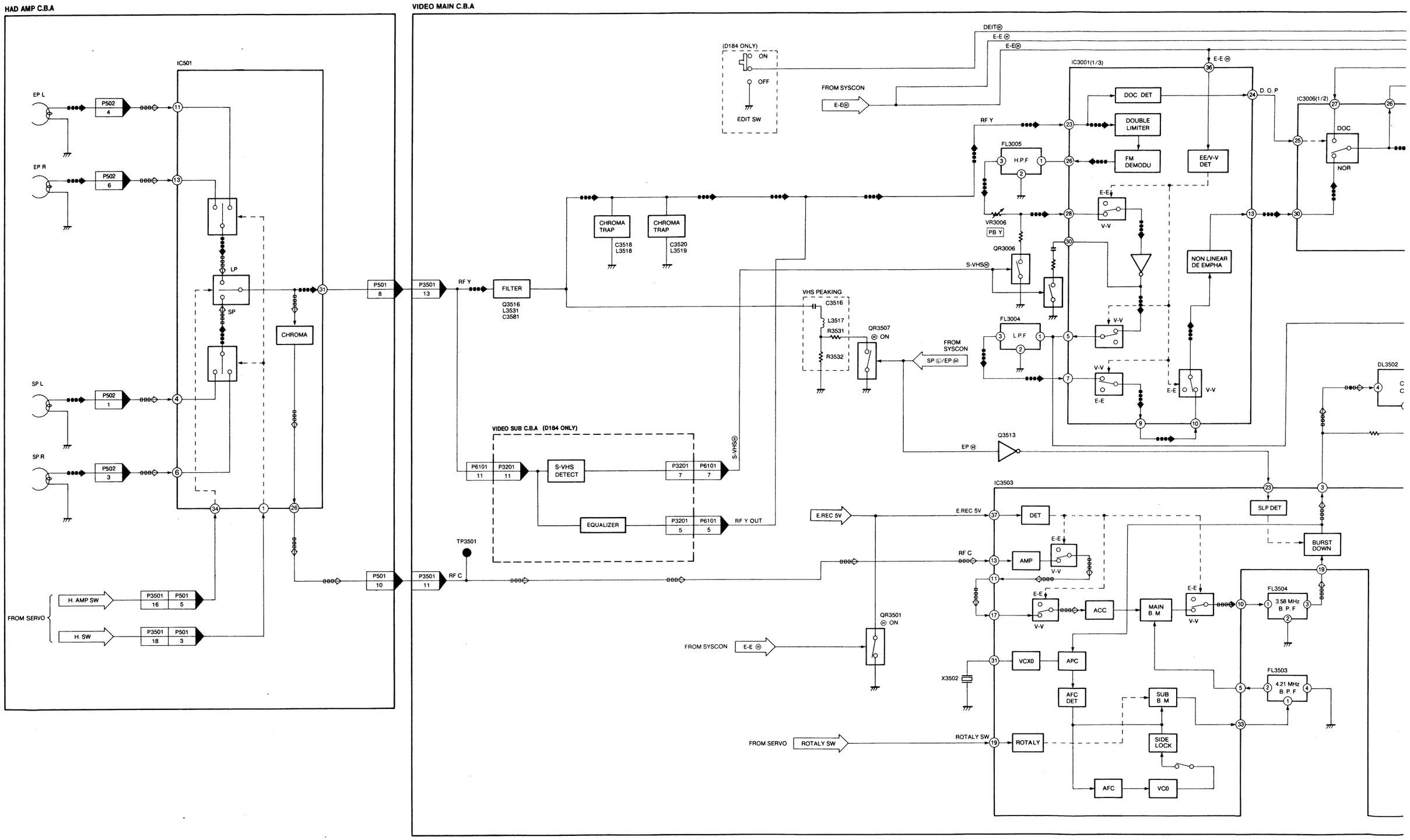
5-3. SYSTEM CONTROL & SERVO BLOCK DIAGRAM

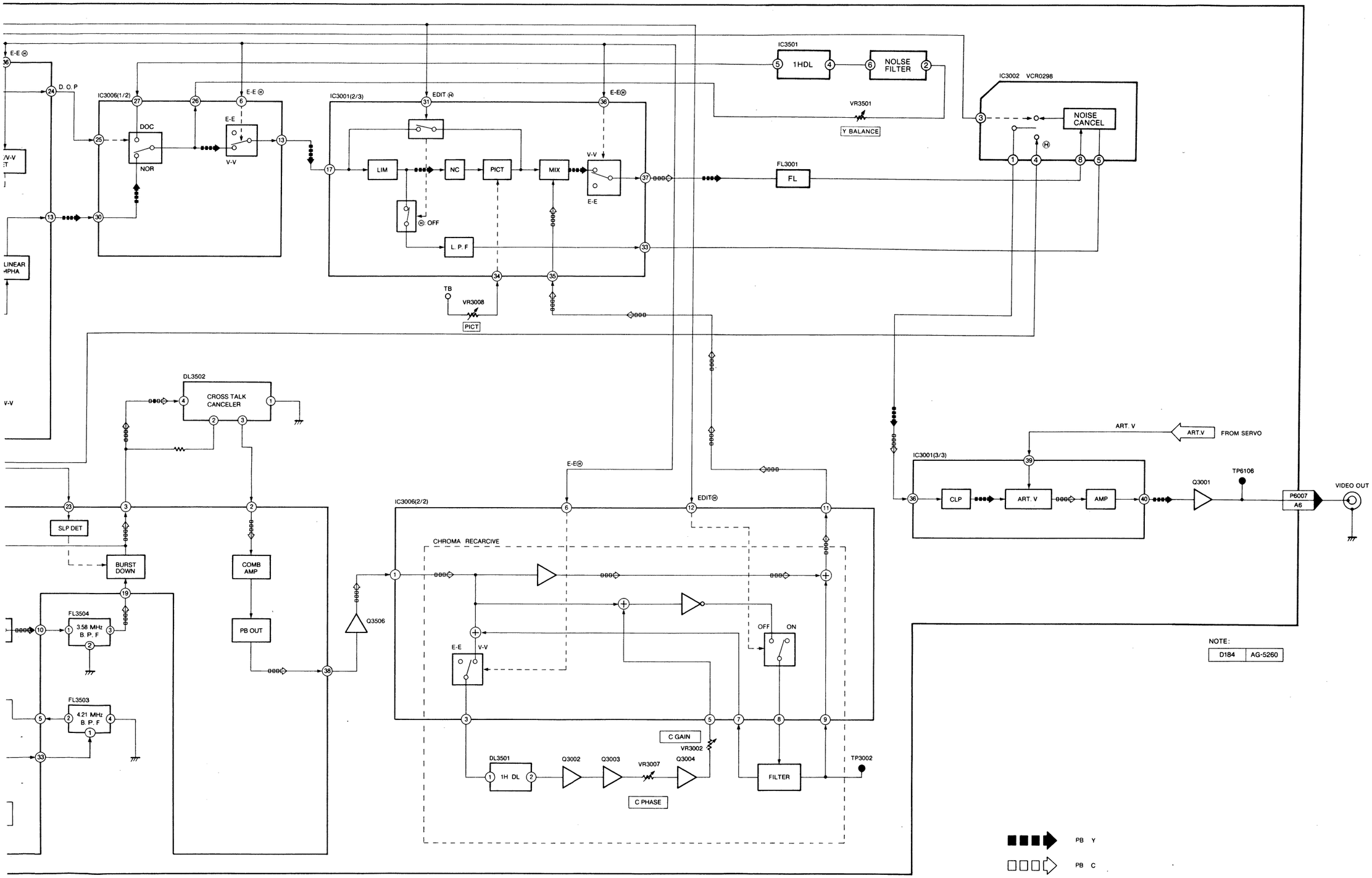




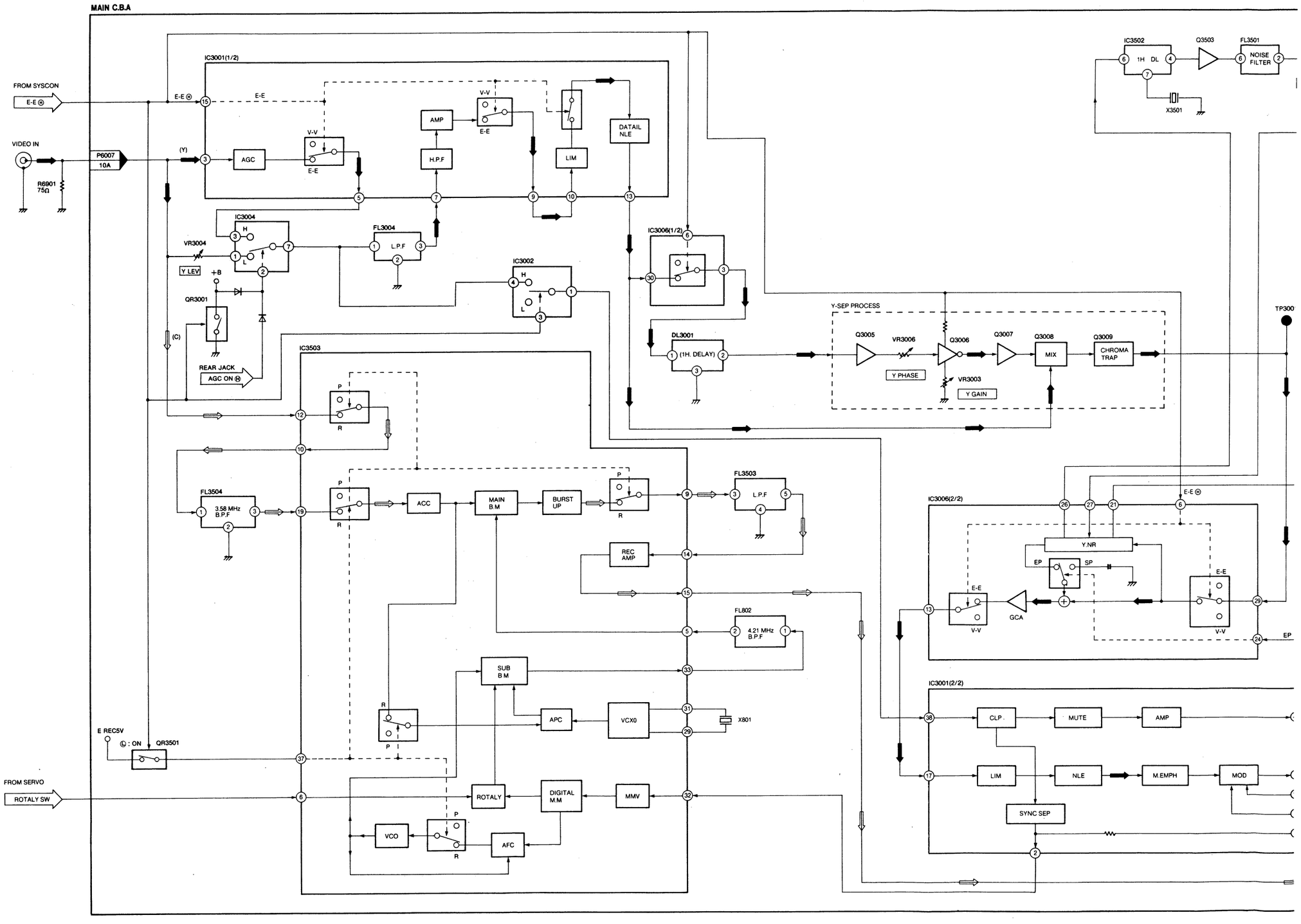
SYMBOL	TRUTH VALUE TABLE
INVERTER 	IN (a) H L / OUT (b) L H
COMPARTOR 	IN (a) (b) (a)>(b) (a)<(b) / OUT (c) H L
AND CIRCUIT	IN (a) L L H H / (b) L H L H / OUT (c) L L L H
OR CIRCUIT	IN (a) L L H H / (b) L H L H / OUT (c) L H H H
THREE STATES BUFFER 	IN (a) H L H or L / (b) L L H / OUT (c) H L ※ ; ※ High Impedance
TR. SW (NPN TYPE) 	BASE H L / TR. SW ON OFF
TR. SW (PNP TYPE) 	BASE H L / TR. SW OFF ON
R-S TYPE FLIP-FLOP 	IN (a) L L ⎍ / (b) L ⎍ L / OUT (c) ※ L H / (d) ◆ H L ; ※ Initial condition is maintained. ◆ Initial condition is reversed.

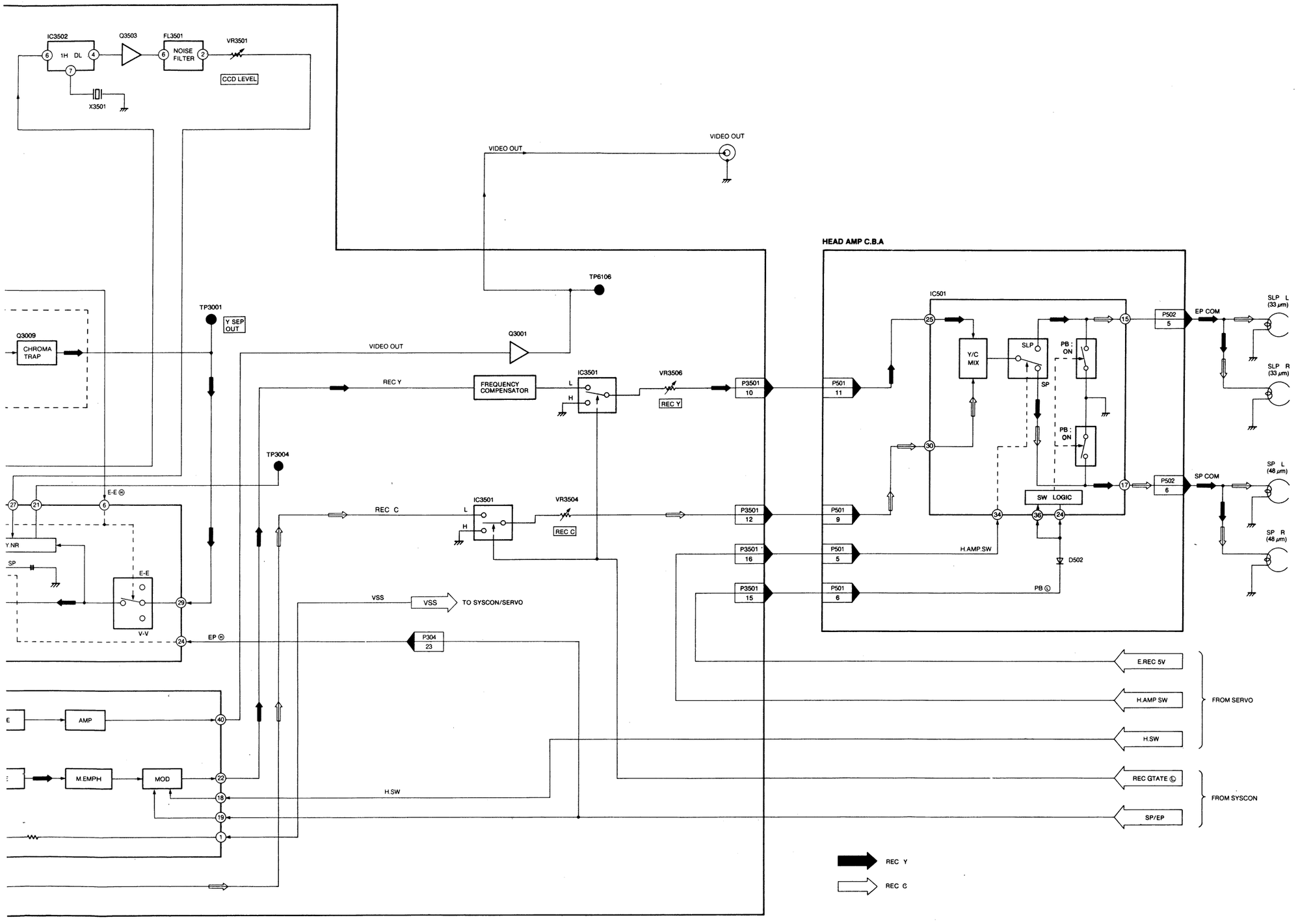
5-4. VIDEO (PLAY) BLOCK DIAGRAM



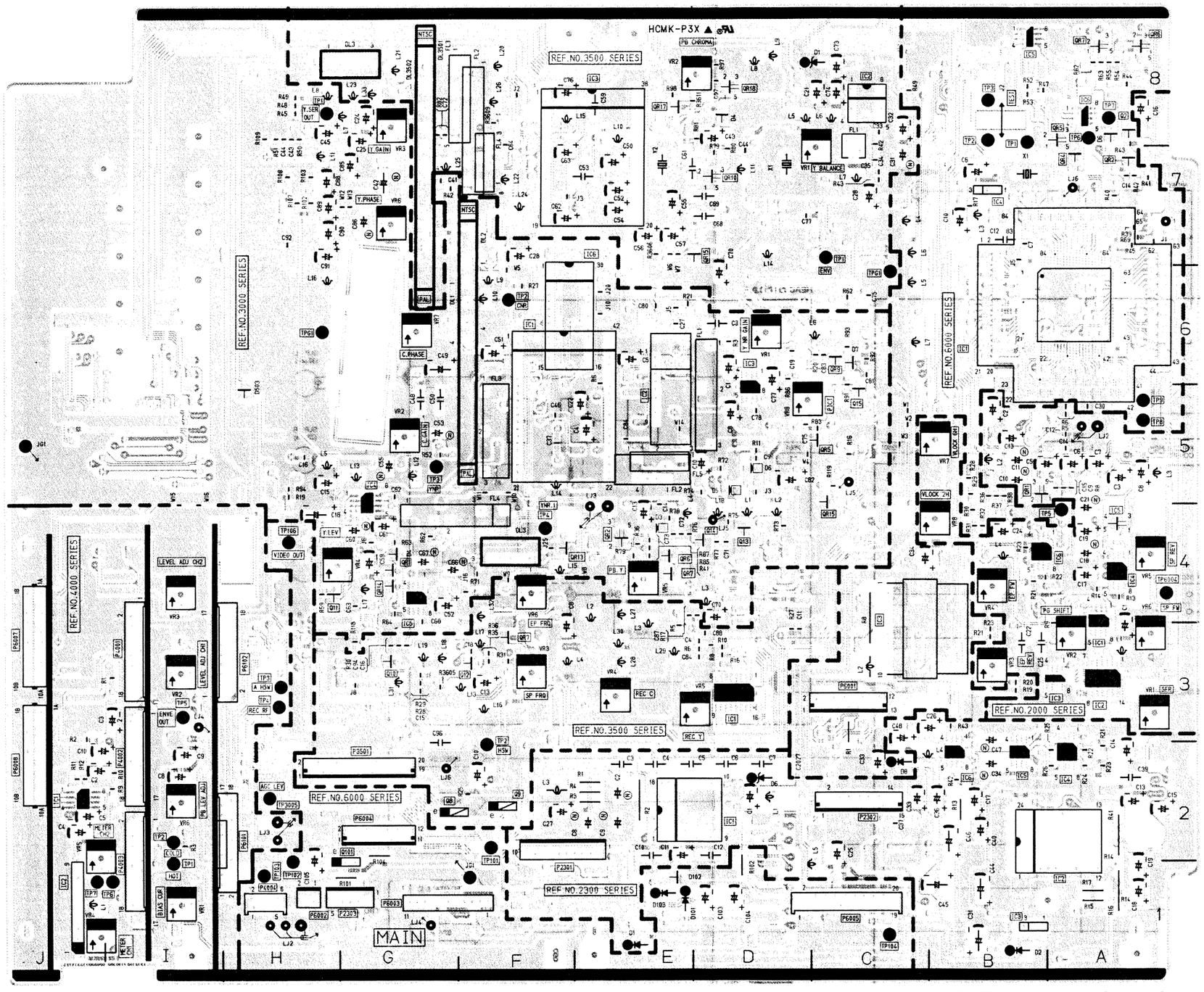

E-E
D. O. P
IC3006(1/2)
DOC
NOR
E-E
V-V
IC3001(2/3)
EDIT
LIM
NC
PICT
MIX
V-V
E-E
OFF
L. P. F
TB
VR3008
PICT
IC3501
1HDL
NOLSE FILTER
VR3501
Y BALANCE
IC3002 VCR0298
NOISE CANCEL
FL3001
FL
DL3502
CROSS TALK CANCELER
SLP DET
BURST DOWN
COMB AMP
PB OUT
FL3504
3.58 MHz B. P. F
FL3503
4.21 MHz B. P. F
Q3506
IC3006(2/2)
CHROMA RECARCIVE
OFF
ON
C GAIN
VR3002
DL3501
1H DL
Q3002
Q3003
VR3007
Q3004
C PHASE
FILTER
TP3002
ART. V
ART.V
FROM SERVO
IC3001(3/3)
CLP
ART. V
AMP
Q3001
TP6106
P6007
A6
VIDEO OUT
NOTE:
D184
AG-5260
PB Y
PB C

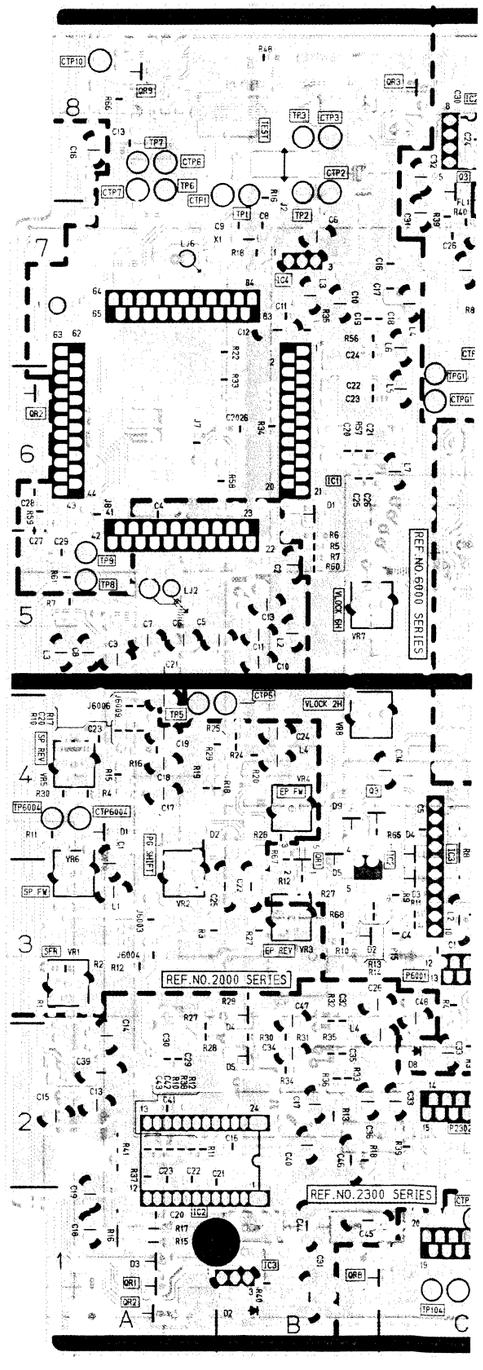
5-5. VIDEO (REC) BLOCK DIAGRAM



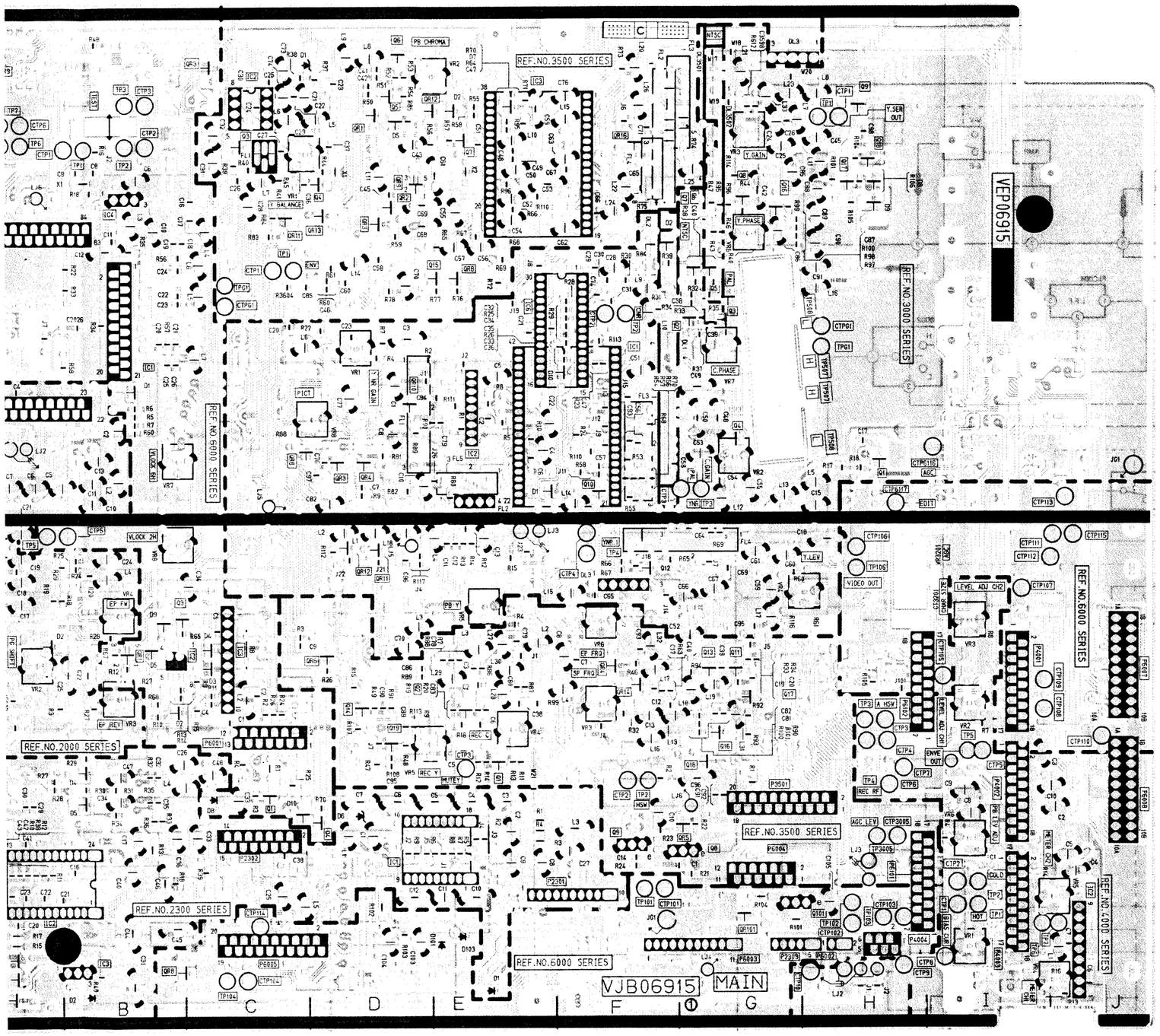

IC3502
1H DL
Q3503
FL3501
NOISE FILTER
VR3501
CCD LEVEL
X3501
VIDEO OUT
VIDEO OUT
TP6106
TP3001
Y SEP OUT
Q3009
CHROMA TRAP
Q3001
VIDEO OUT
REC Y
FREQUENCY COMPENSATOR
IC3501
L
H
VR3506
REC Y
P3501 10
P501 11
HEAD AMP C.B.A
IC501
25
Y/C MIX
SLP
SP
PB : ON
15
P502 5
EP COM
SLP L (33 μm)
SLP R (33 μm)
30
PB : ON
TP3004
E-E Ⓔ
27
21
6
REC C
IC3501
L
H
VR3504
REC C
P3501 12
P501 9
SW LOGIC
17
P502 6
SP COM
SP L (48 μm)
SP R (48 μm)
34
36
24
P3501 16
P501 5
H.AMP.SW
D502
Y NR
SP
E-E
V-V
29
VSS
VSS
TO SYSCON/SERVO
P3501 15
P501 6
PB Ⓛ
24
EP Ⓔ
P304 23
E.REC 5V
H.AMP SW
H.SW
FROM SERVO
AMP
40
M.EMPH
MOD
22
18
19
1
H.SW
REC GTATE Ⓛ
SP/EP
FROM SYSCON
REC Y
REC C

6-1. MAIN C.B.A.





(COMPONENT SIDE)

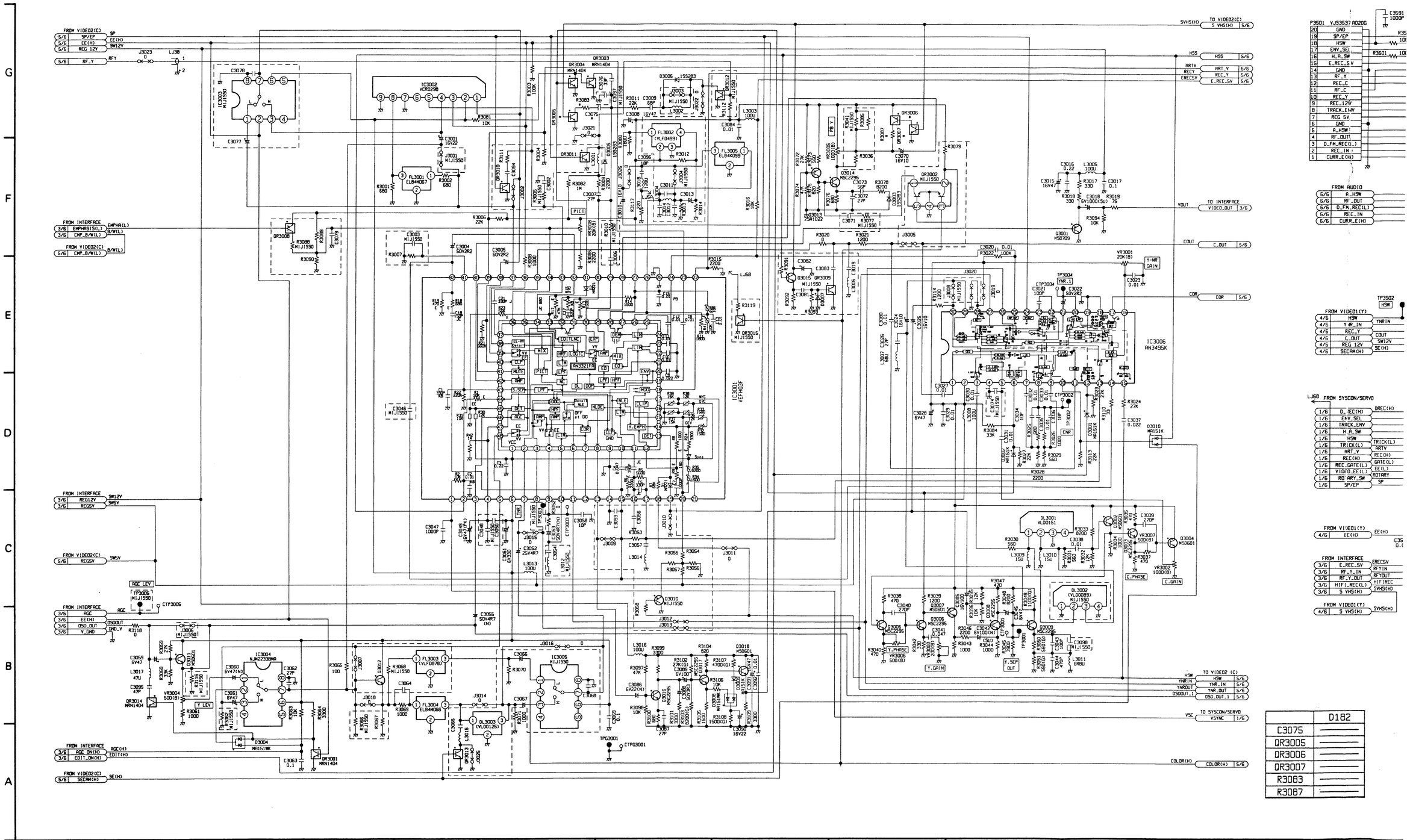


(FOIL SIDE)

MAIN (VEP06915A)					
COMPONENT SIDE				FOIL SIDE	
TRANSISTOR				TRANSISTOR	
Q3011	H-4	TP6002	B-8	Q3001	H-5
Q3013	D-4	TP6003	B-8	Q3002	G-6
Q3014	D-4	TP6004	A-4	Q3003	G-6
Q3015	C-5	TP6005	A-4	Q3004	G-5
Q3508	G-2	TP6006	A-8	Q3005	G-6
Q3509	F-2	TP6007	A-8	Q3006	G-7
Q3510	G-3	TP6008	A-5	Q3007	G-7
Q3512	F-3	TP6009	A-5	Q3008	G-7
Q6101	G-2	TP6101	F-2	Q3009	H-8
TRANSISTOR RESISTOR		TP6102	H-1	Q3010	F-5
QR2001	B-5	TP6103	H-1	Q3012	F-4
QR3001	G-4	TP6104	C-1	Q3016	G-7
QR3002	E-4	TP6104	H-4	Q3017	H-7
QR3009	C-6	TPG3001	H-6	Q3018	H-7
QR3013	F-4	TPG3501	C-6	Q3501	E-3
QR3014	G-4	CONNECTOR		Q3502	E-3
QR3015	C-5	P2301	F-2	Q3503	C-8
QR3507	F-3	P2302	C-2	Q3504	D-7
QR3510	D-7	P2303	G-1	Q3505	D-8
QR3515	D-7	P3501	G-2	Q3506	D-8
QR3517	E-8	P4001	I-3	Q3507	E-8
QR3518	D-8	P4002	I-2	Q3511	G-3
QR6005	A-8	P4003	I-2	Q3513	G-3
QR6006	A-8	P4004	H-1	Q3514	D-3
QR6007	A-8	P6001	C-3	Q3515	E-7
INTEGRATED CIRCUITS		P6002	H-1	Q3516	G-3
IC2001	A-3	P6003	G-1	Q3517	G-3
IC2004	A-4	P6004	G-2	Q3518	G-3
IC2006	B-4	P6005	C-1	Q3519	D-3
IC2301	D-2	P6007	J-3	Q6001	C-2
IC2302	A-2	P6008	J-2	Q6004	D-2
IC2304	A-2	ADJUSTMENT		TRANSISTOR RESISTOR	
IC2305	B-2	VR2001	A-3	QR2002	A-6
IC2306	B-2	VR2002	A-3	QR3003	D-5
IC3001	F-6	VR2004	B-4	QR3004	D-5
IC3002	E-5	VR2006	A-3	QR3008	C-5
IC3003	D-6	VR2007	B-5	QR3010	D-6
IC3004	G-5	VR2008	B-4	QR3011	D-4
IC3005	G-4	VR3001	D-6	QR3012	D-4
IC3006	F-6	VR3002	G-5	QR3501	D-8
IC3501	D-3	VR3003	G-8	QR3502	D-7
IC3502	C-8	VR3004	G-4	QR3503	D-7
IC3503	E-8	VR3005	E-4	QR3504	F-3
IC4001	J-2	VR3006	G-7	QR3505	G-2
IC4002	J-1	VR3007	G-6	QR3506	D-3
IC6001	A-6	VR3008	D-5	QR3508	E-7
IC6003	C-4	VR3501	C-7	QR3509	D-7
IC6004	B-7	VR3502	D-8	QR3511	C-7
IC6006	A-8	VR3503	F-3	QR3512	D-8
TESTPOINT		VR3504	E-3	QR3513	D-7
TP3001	H-8	VR3505	D-3	QR3514	F-3
TP3002	F-6	VR3506	F-4	QR3516	F-8
TP3003	G-5	VR4001	I-1	QR6001	B-4
TP3004	F-4	VR4002	I-3	QR6008	B-1
TP3005	H-2	VR4003	I-4	QR6009	A-8
TP3501	C-7	VR4004	J-1	QR6101	G-1
TP3502	F-3	VR4005	J-2	INTEGRATED CIRCUITS	
TP4001	I-1	VR4006	I-2	IC6002	B-3
TP4002	I-2				
TP4003	H-3				
TP4004	H-3				
TP4005	I-3				
TP4006	I-1				
TP4007	J-1				
TP6001	B-8				

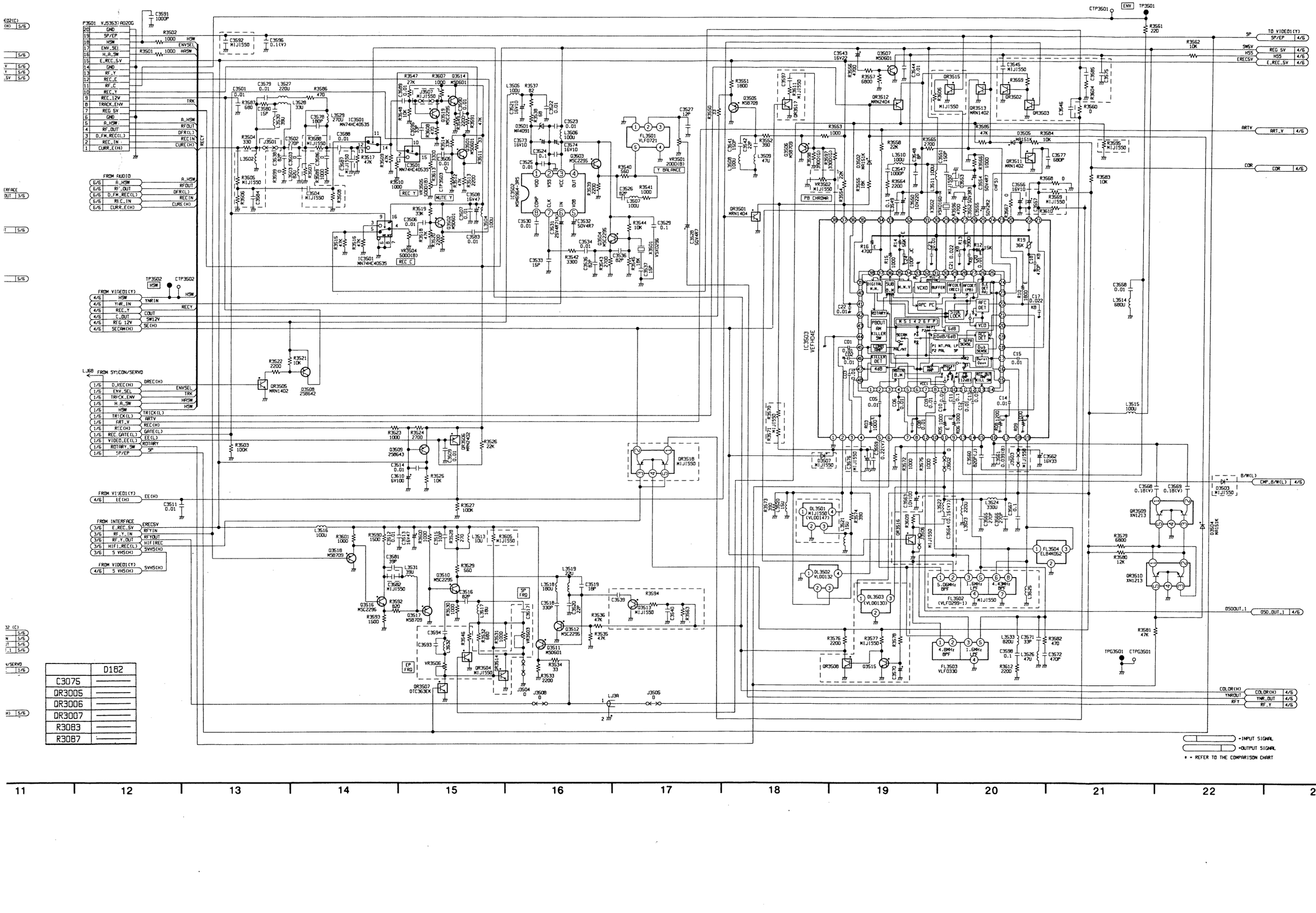
ADDRESS INFORMATION

6-2. VIDEO 1 SCHEMATIC DIAGRAM



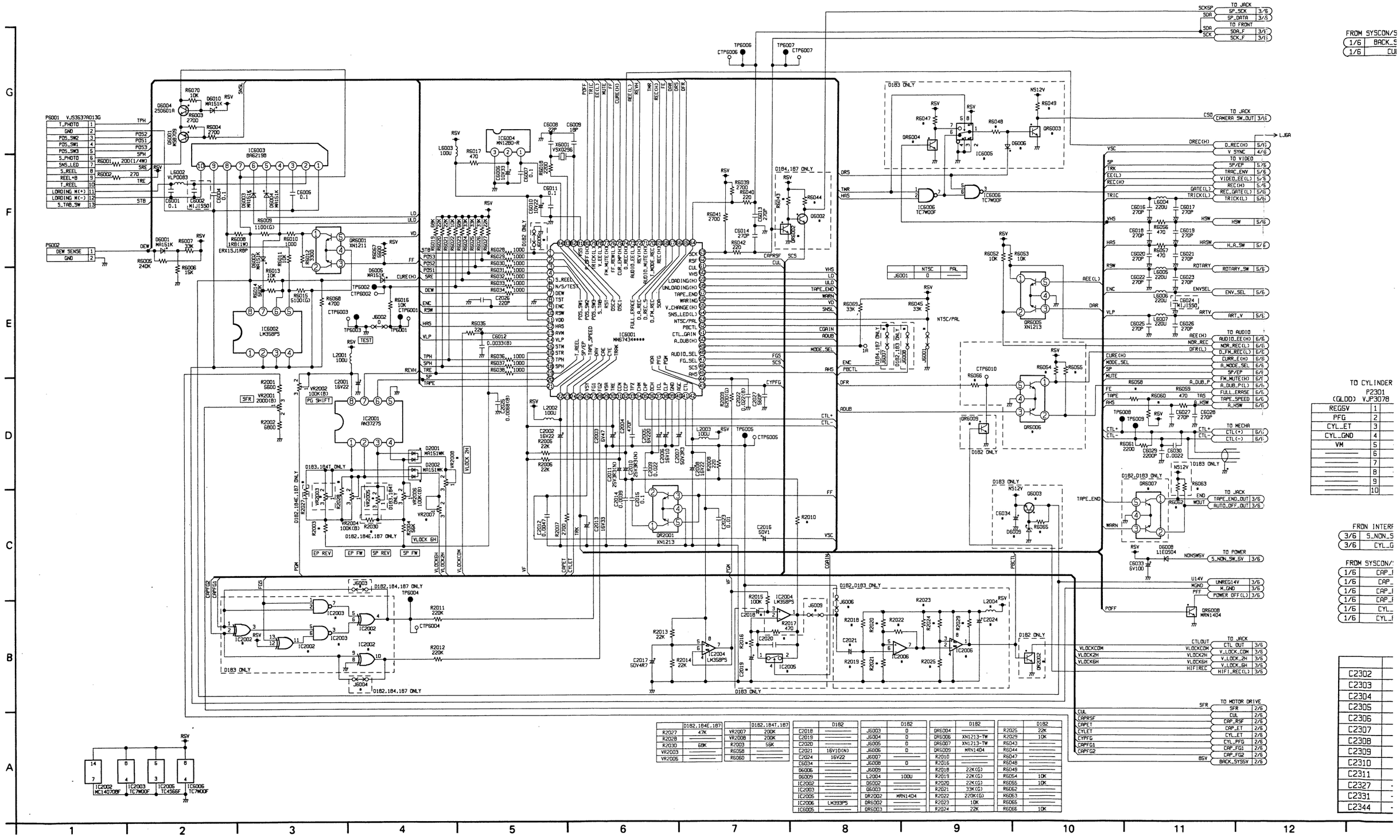
	D182
C3075	
DR3005	
DR3006	
DR3007	
R3083	
R3087	

6-3. VIDEO 2 SCHEMATIC DIAGRAM

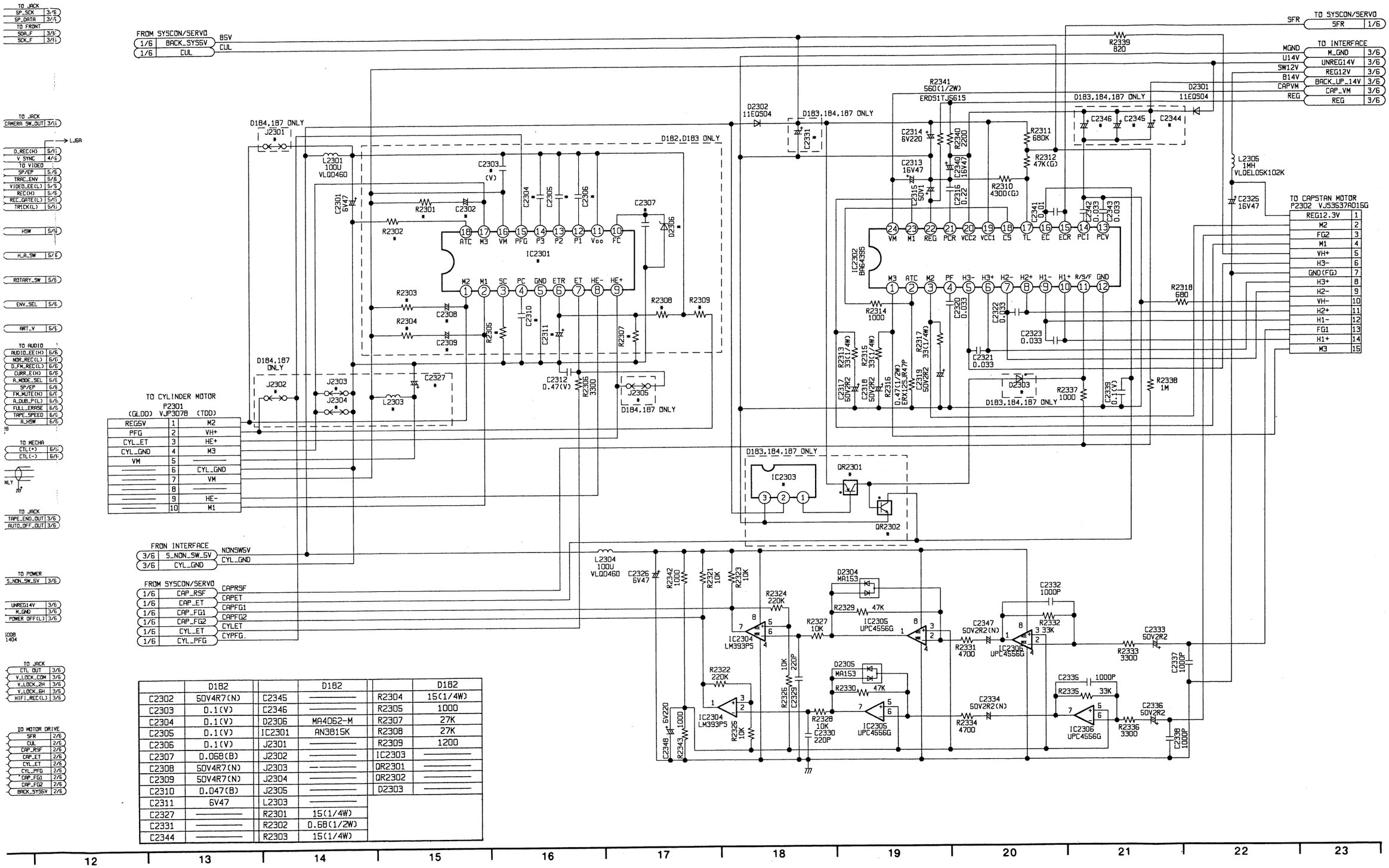


	D182
C3075	
QR3005	
QR3006	
QR3007	
R3083	
R3087	

6-4. SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM



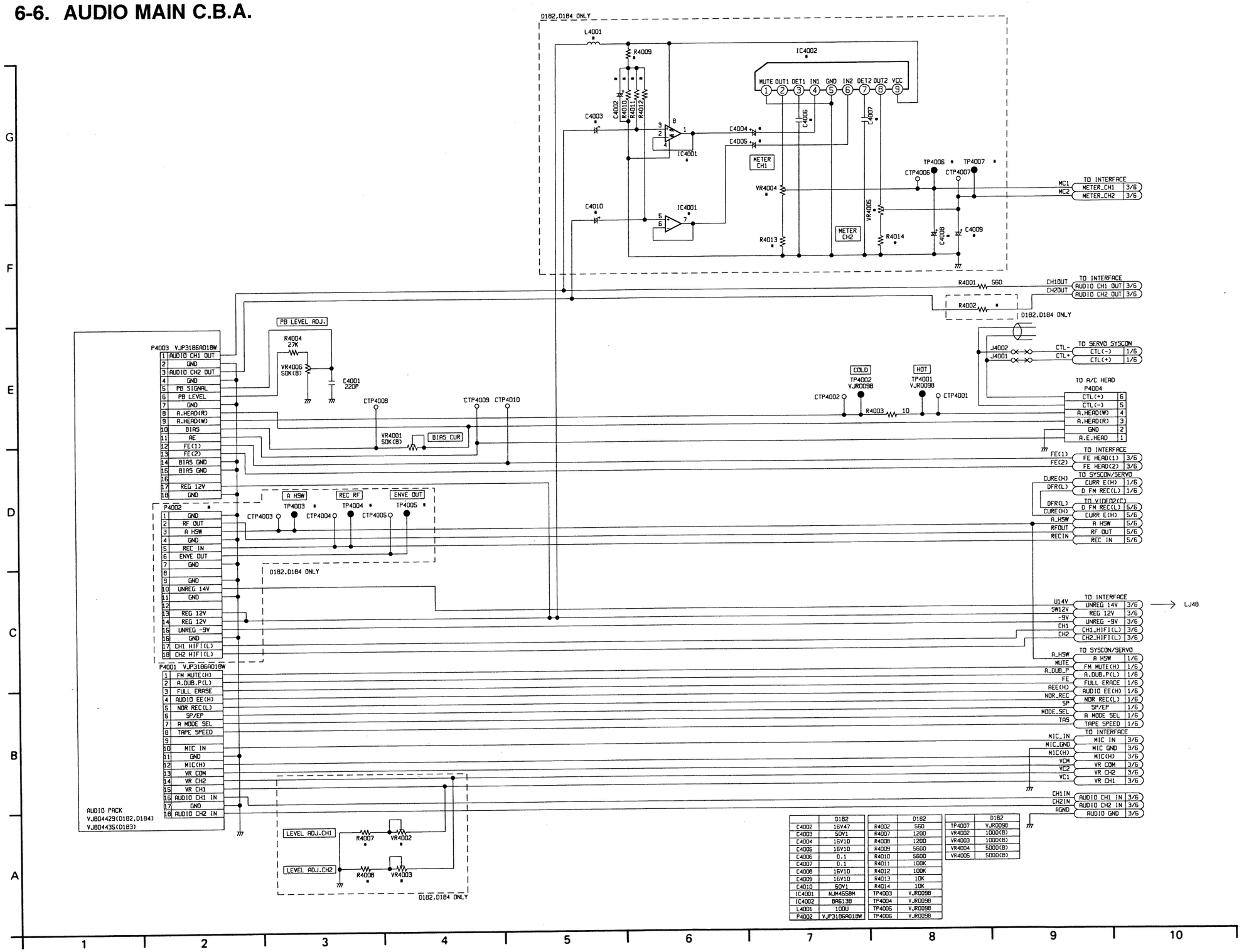
6-5. MOTOR DRIVE SCHEMATIC DIAGRAM



	D182		D182		D182
C2302	50V4R7(N)	C2345	———	R2304	15(1/4W)
C2303	0.1(V)	C2346	———	R2305	1000
C2304	0.1(V)	D2306	MA4062-M	R2307	27K
C2305	0.1(V)	IC2301	AN3815K	R2308	27K
C2306	0.1(V)	J2301	———	R2309	1200
C2307	0.068(B)	J2302	———	IC2303	———
C2308	50V4R7(N)	J2303	———	QR2301	———
C2309	50V4R7(N)	J2304	———	QR2302	———
C2310	0.047(B)	J2305	———	D2303	———
C2311	6V47	L2303	———		
C2327	———	R2301	15(1/4W)		
C2331	———	R2302	0.68(1/2W)		
C2344	———	R2303	15(1/4W)		

12 13 14 15 16 17 18 19 20 21 22 23

6-6. AUDIO MAIN C.B.A.

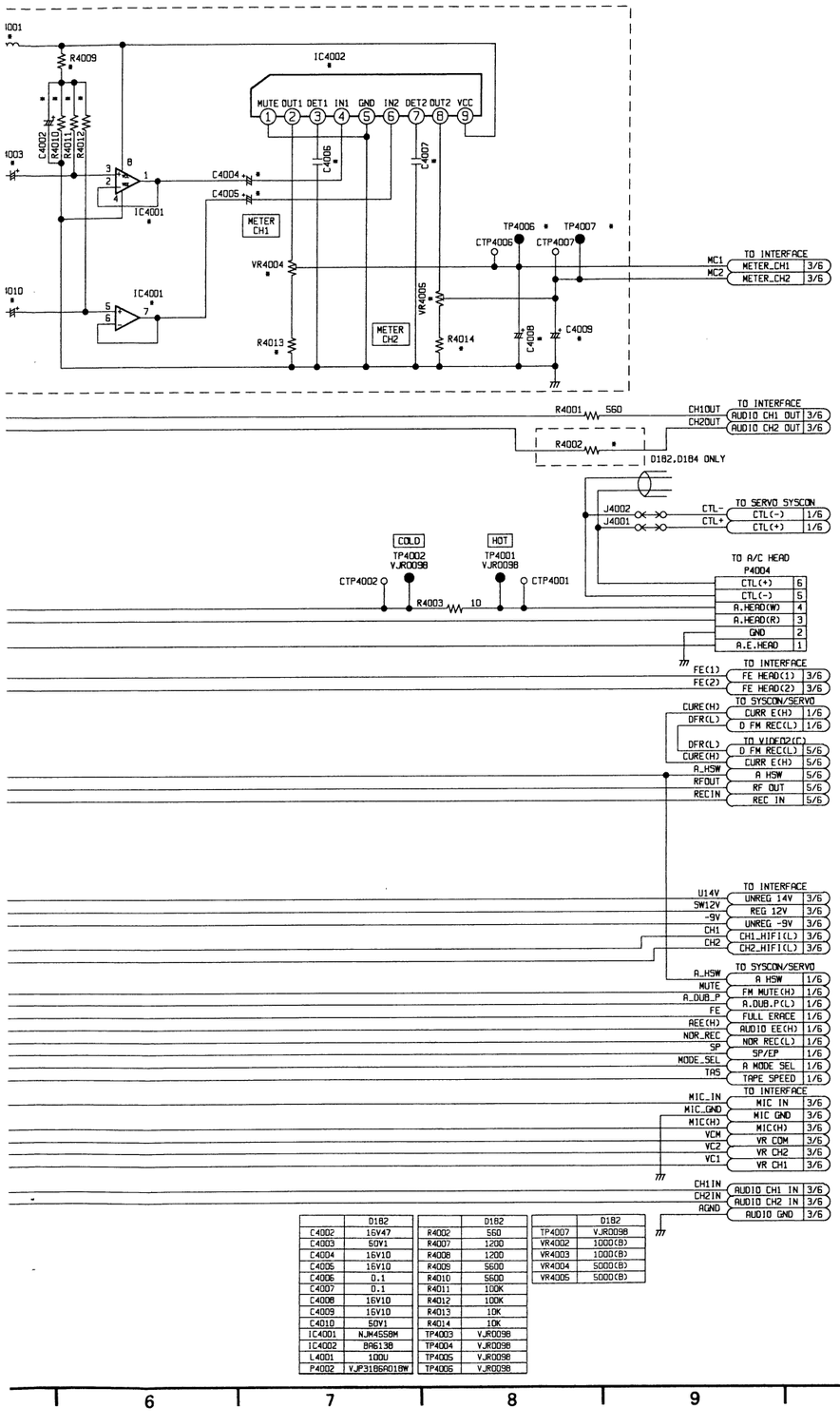


	D182
C4002	16V47
C4003	50V1
C4004	16V10
C4005	16V10
C4006	0.1
C4007	0.1
C4008	16V10
C4009	16V10
C4010	50V1
IC4001	NJM4558M
IC4002	BA6138
L4001	100U
P4002	VJP3186A018W

	D182
R4002	560
R4007	1200
R4008	1200
R4009	5600
R4010	5600
R4011	100K
R4012	100K
R4013	10K
R4014	10K
TP4003	VJR0098
TP4004	VJR0098
TP4005	VJR0098
TP4006	VJR0098

	D182
TP4007	VJR0098
VR4002	1000(B)
VR4003	1000(B)
VR4004	5000(B)
VR4005	5000(B)

6-7. AUD

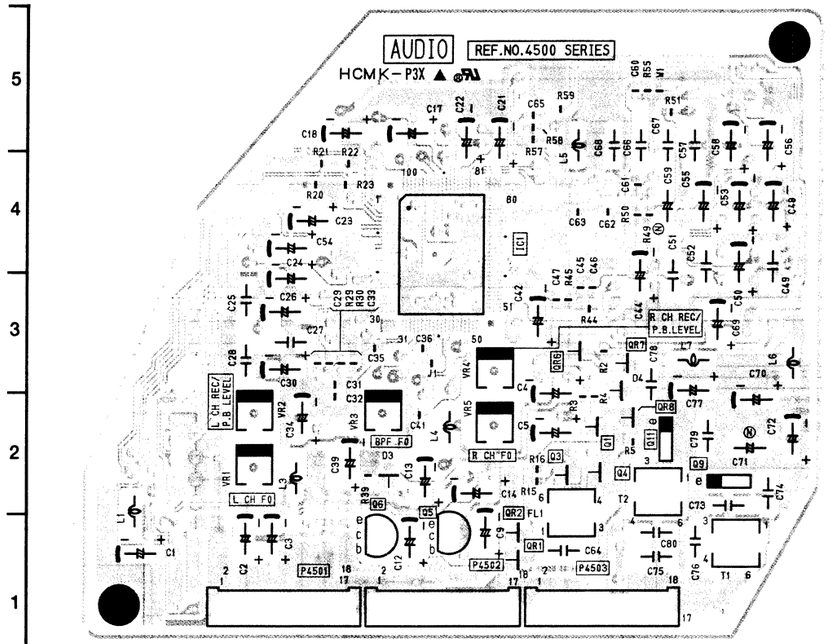


	D182
C4002	16V47
C4003	50V1
C4004	16V10
C4005	16V10
C4006	0.1
C4007	0.1
C4008	16V10
C4009	16V10
C4010	50V1
IC4001	NJM4558M
IC4002	BA6138
L4001	100U
P4002	VJP3186R018W

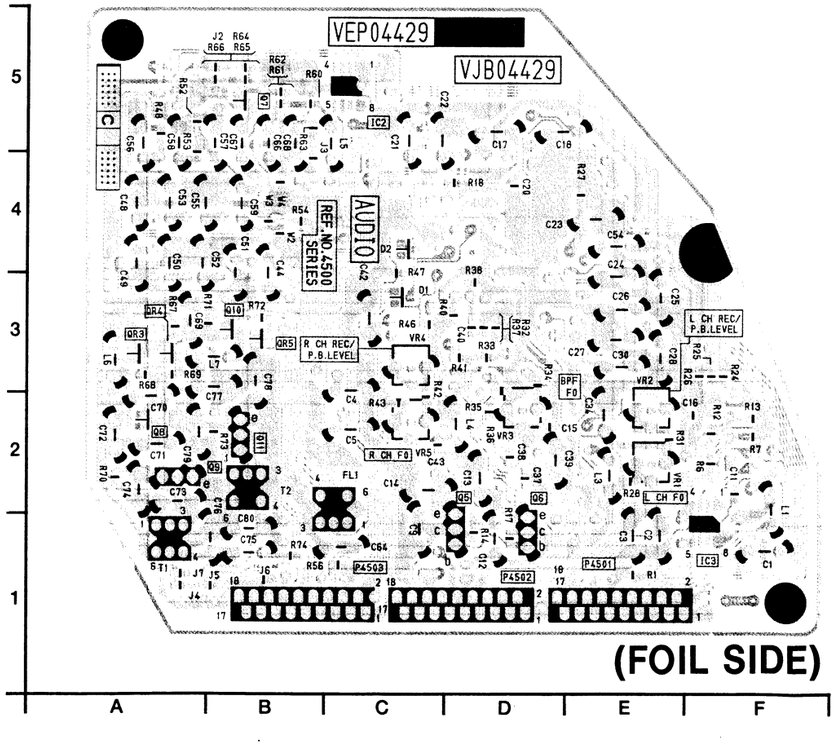
	D182
R4002	560
R4007	1200
R4008	1200
R4009	5600
R4010	5600
R4011	100K
R4012	100K
R4013	10K
R4014	10K
TP4003	VJR0098
TP4004	VJR0098
TP4005	VJR0098
TP4006	VJR0098

	D182
TP4007	VJR0098
VR4002	1000(B)
VR4003	1000(B)
VR4004	5000(B)
VR4005	5000(B)

6-7. AUDIO C.B.A.



(COMPONENT SIDE)

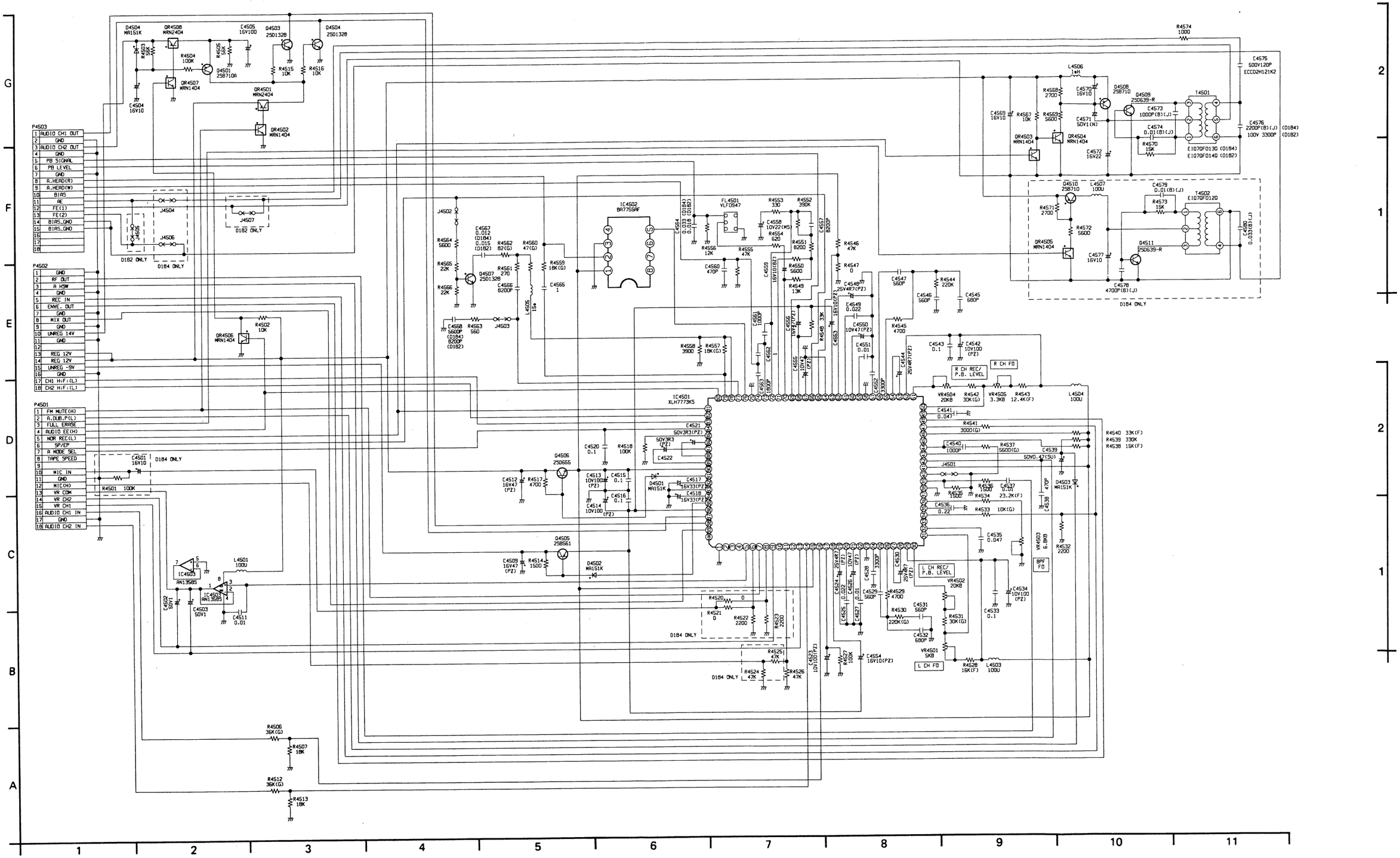


(FOIL SIDE)

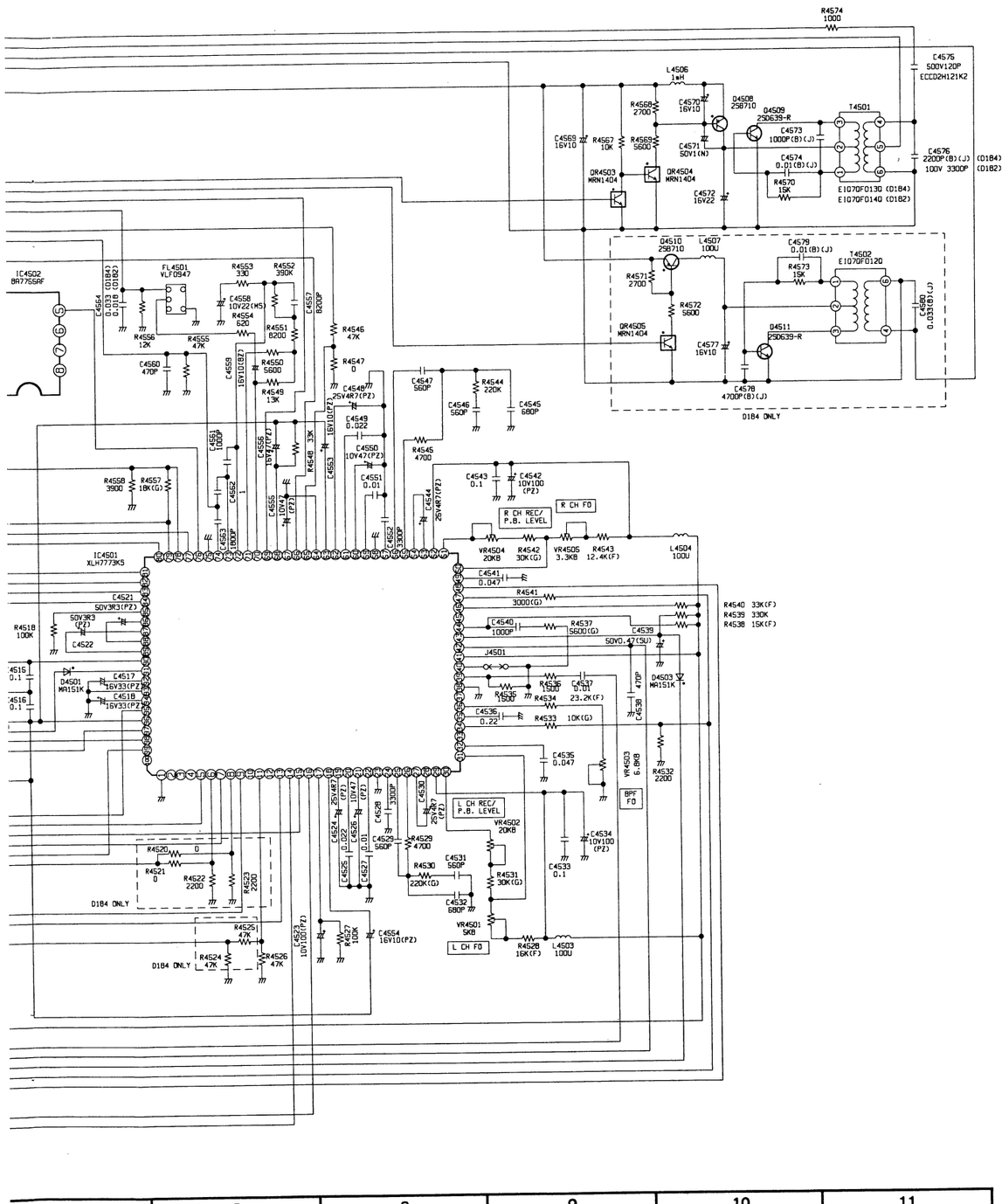
AUDIO (VEP04429A)			
COMPONENT SIDE		FOIL SIDE	
TRANSISTOR		TRANSISTOR	
Q4501	B-2	Q4507	B-5
Q4503	C-2	Q4508	A-2
Q4504	B-2	TRANSISTOR RESISTOR	
Q4505	D-1	QR4503	A-3
Q4506	D-1	QR4504	A-3
Q4509	A-2	INTEGRATED CIRCUITS	
TRANSISTOR RESISTOR		IC4502	C-5
QR4501	C-1	IC4503	F-1
QR4502	C-1		
QR4506	B-3		
QR4507	B-3		
QR4508	B-2		
INTEGRATED CIRCUITS			
IC4501	D-4		
CONNECTOR			
P4501	E-1		
P4502	D-1		
P4503	B-1		
ADJUSTMENT			
VR4501	E-2		
VR4502	E-2		
VR4503	D-2		
VR4504	C-3		
VR4505	C-2		

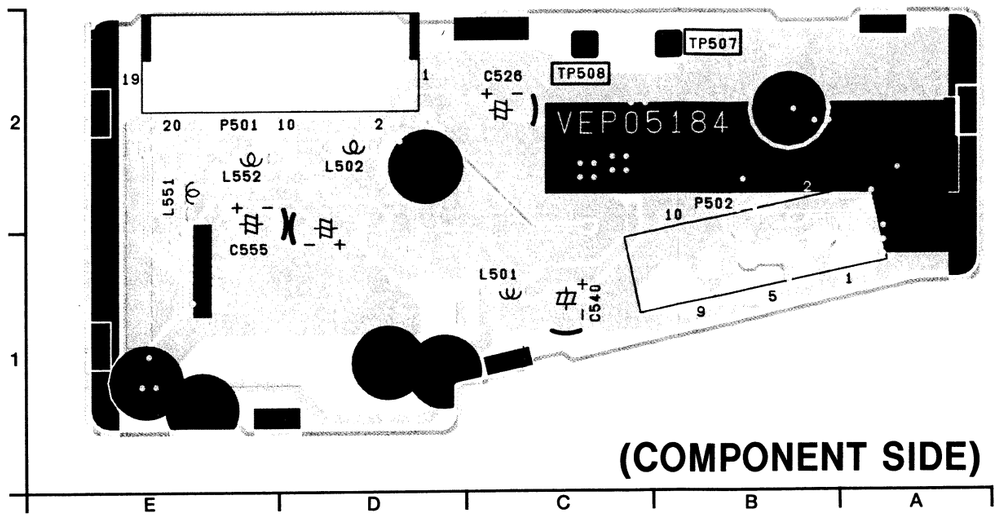
ADDRESS INFORMATION

6-8. AUDIO SCHEMATIC DIAGRAM

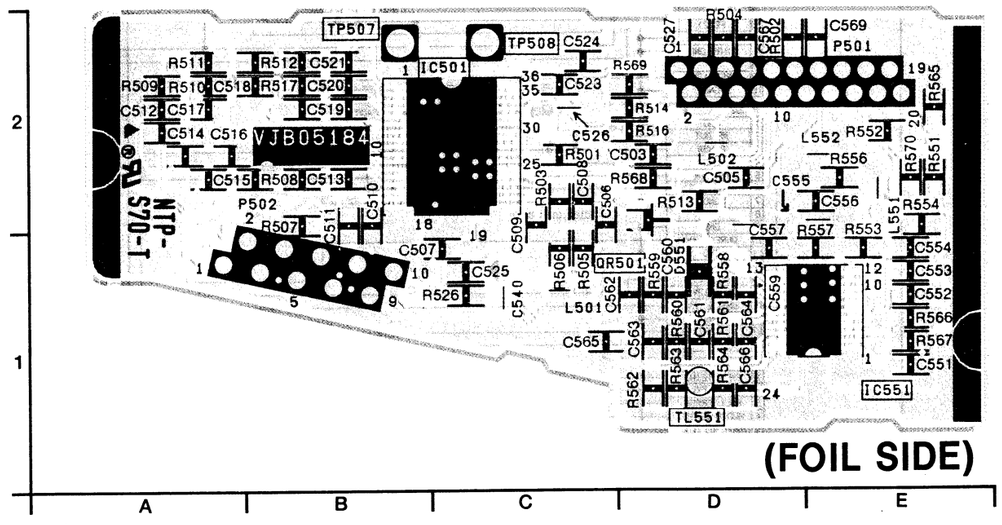


6-9. HEAD AMP PACK C.B.A.





(COMPONENT SIDE)

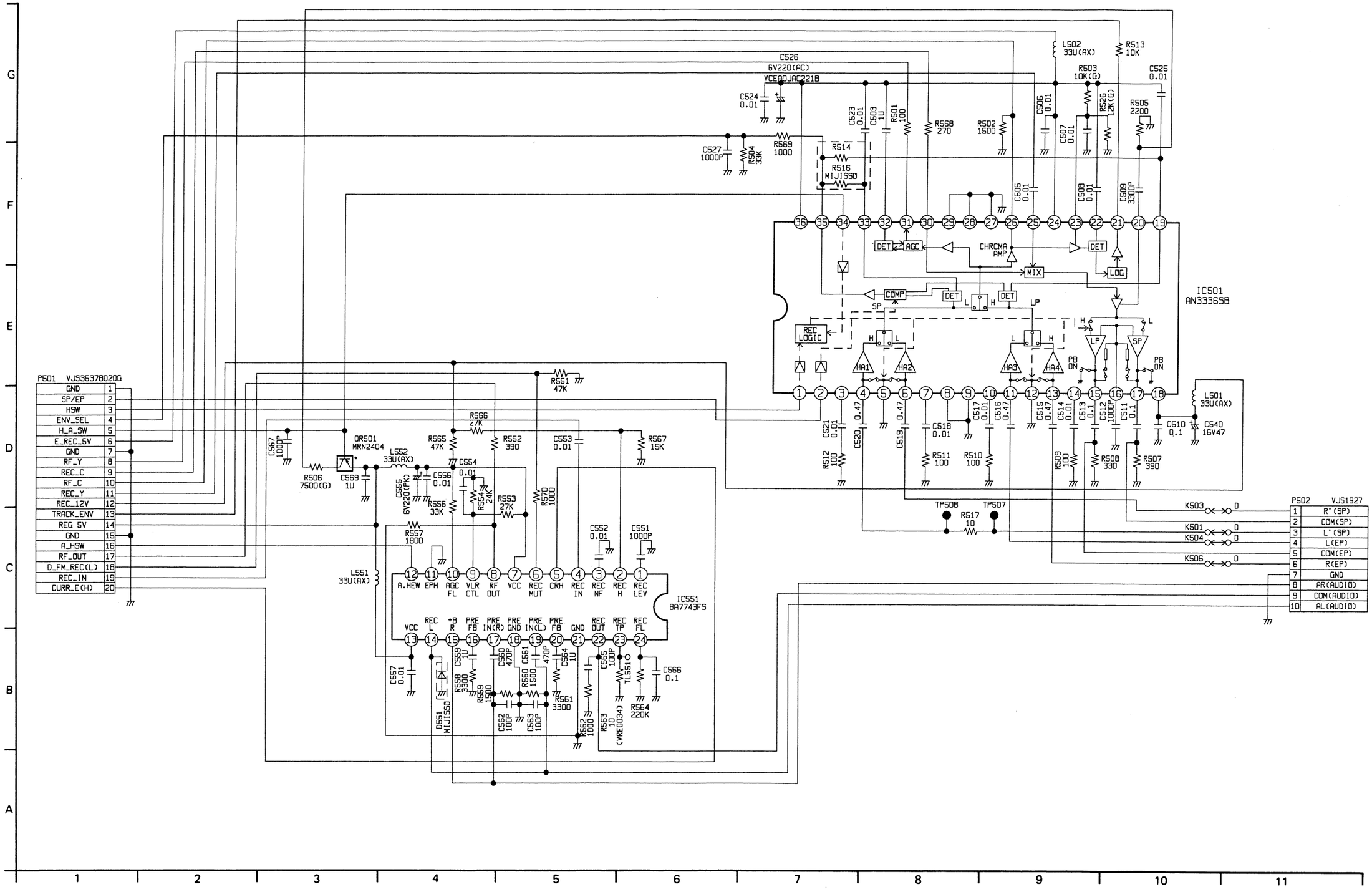


(FOIL SIDE)

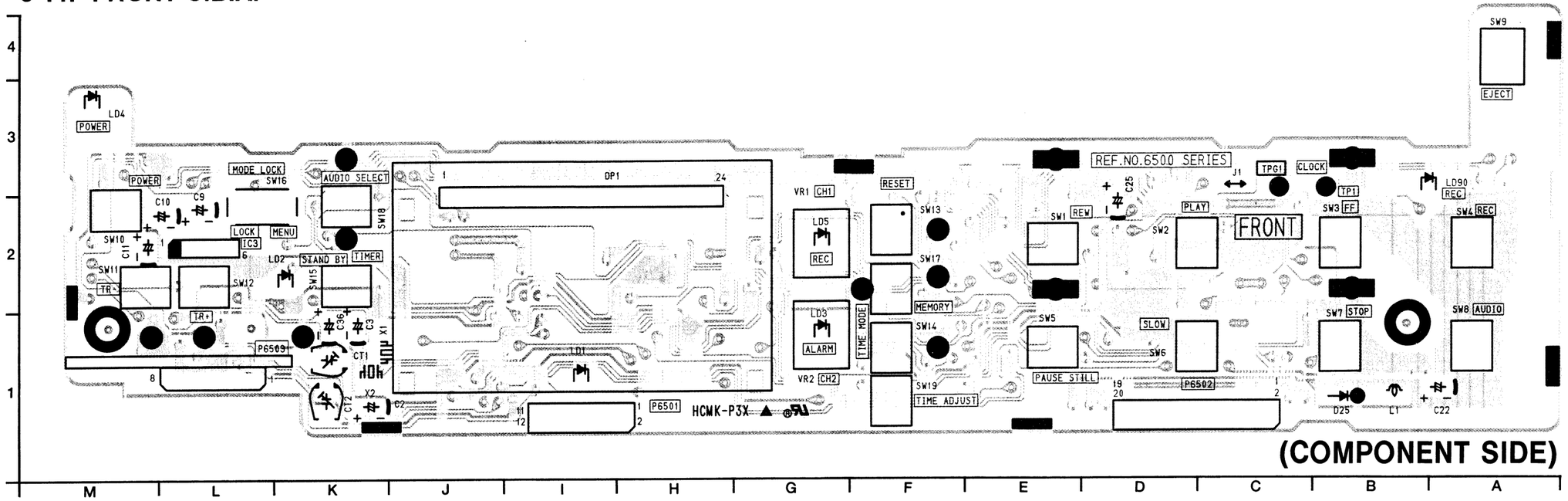
HEAD AMP PACK (VEP05184A)			
COMPONENT SIDE		**FOIL SIDE**	
TESTPOINT		**TRANSISTOR RESISTOR**	
TP507	B-2	QR501	D-2
TP508	C-2		
CONNECTOR		**INTEGRATED CIRCUITS**	
P501	E-2	IC501	C-2
P502	B-1	IC551	E-1

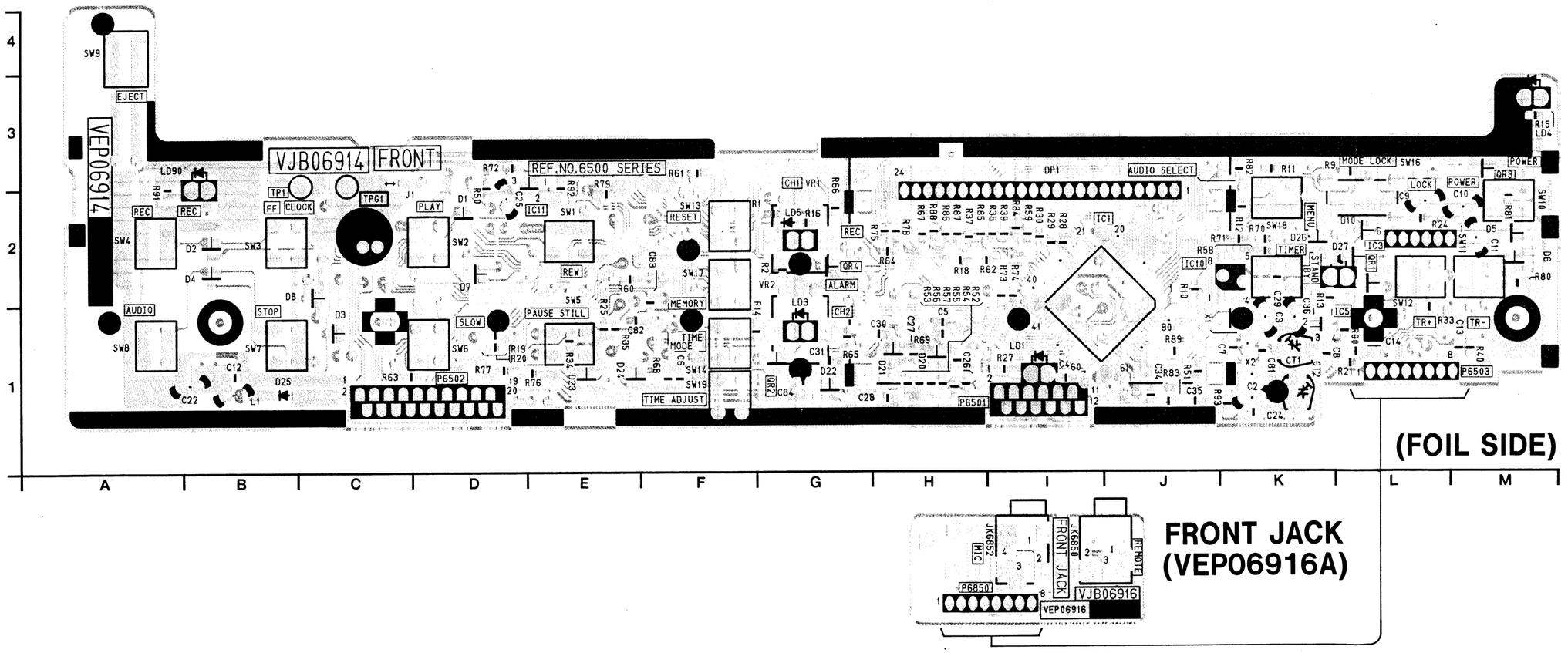
ADDRESS INFORMATION

6-10. HEAD AMP PACK SCHEMATIC DIAGRAM



6-11. FRONT C.B.A.

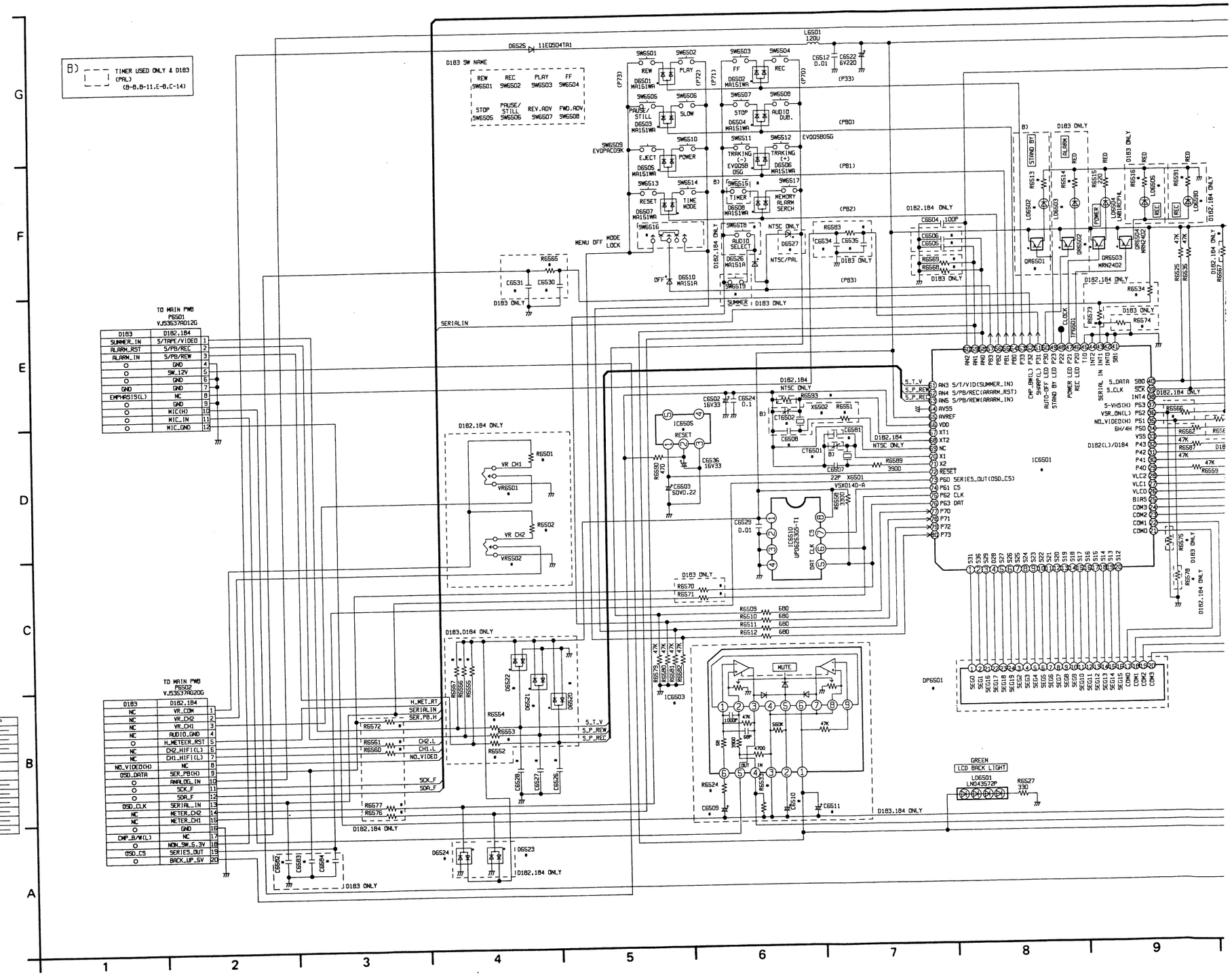




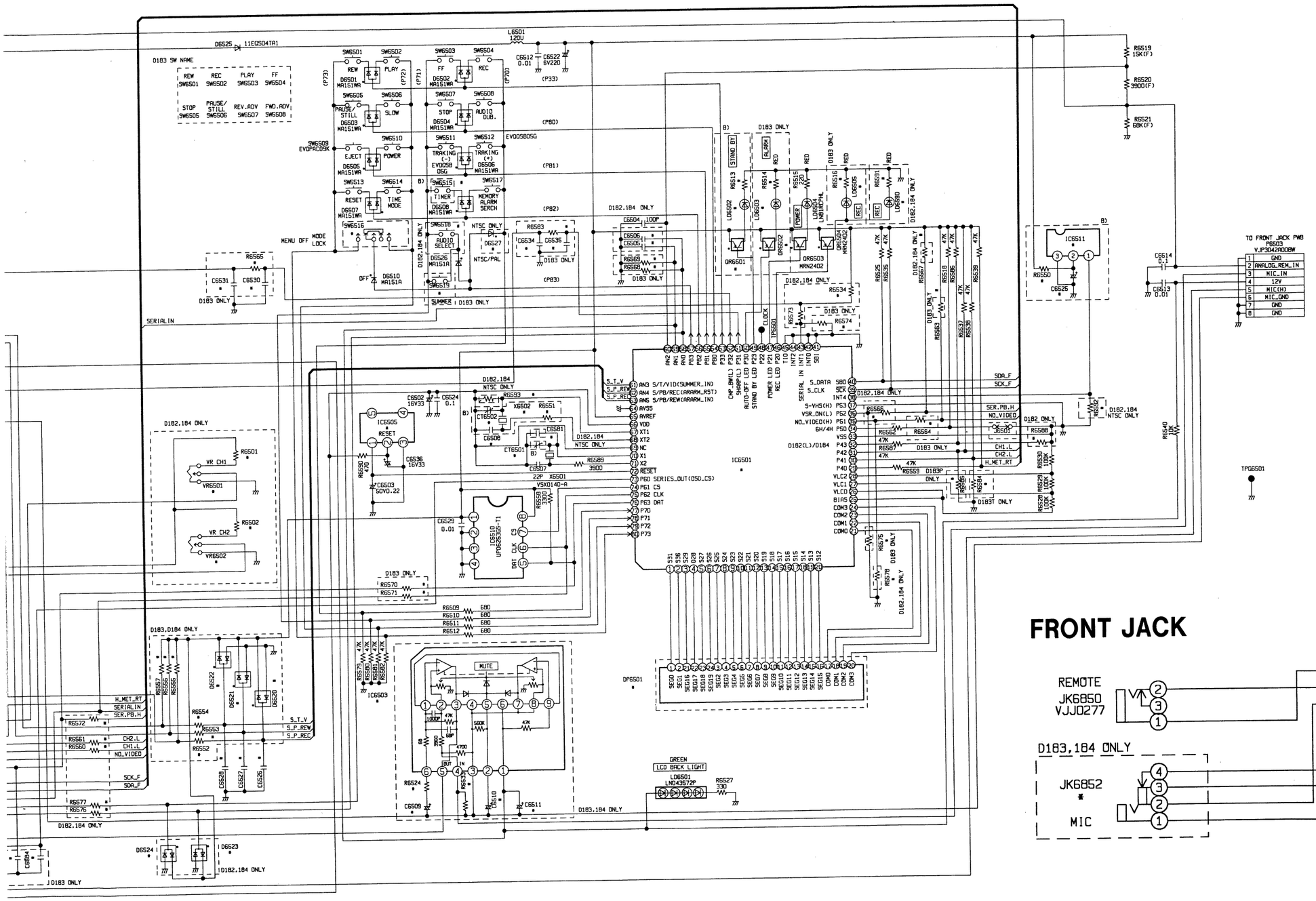
6-12. FRONT & FRONT JACK SCHEMATIC DIAGRAM

FRONT (VEP06914A)			
COMPONENT SIDE		FOIL SIDE	
TESTPOINT		TRANSITOR	
TP6501	C-3	QR6503	M-3
TPG6501	C-3	QR6504	G-2
CONNECTOR		INTEGRATED CIRCUITS	
P6501	I-1	IC6501	I-2
P6502	D-1	IC6505	K-1
P6503	L-1	IC6510	J-2
ADJUSTMENT			
VR6501	G-2		
VR6502	G-1		
SWITCH			
SW6501	E-2		
SW6502	D-2		
SW6503	B-2		
SW6504	A-2		
SW6505	E-1		
SW6506	D-1		
SW6507	B-1		
SW6508	A-1		
SW6509	A-4		
SW6510	M-2		
SW6511	M-2		
SW6512	L-2		
SW6513	F-2		
SW6514	F-1		
SW6516	L-3		
SW6517	F-2		
SW6518	K-2		

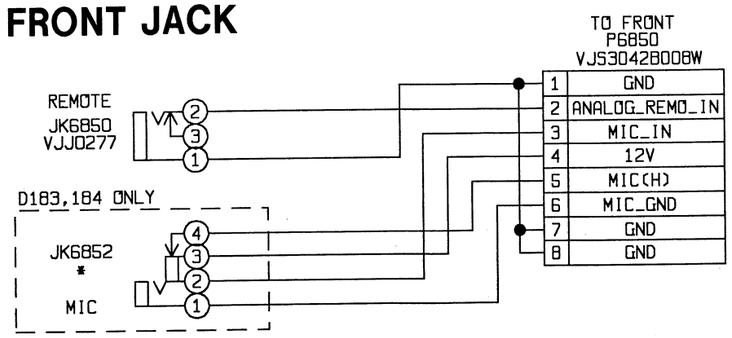
ADDRESS INFORMATION


B) TIMER USED ONLY & D183 (PAL) (B-8,B-11,E-8,C-14)
D183 SW NAME
REW SWS01 REC SWS02 PLAY SWS03 FF SWS04
STOP SWS05 PAUSE/STILL SWS06 REV.ADV SWS07 FWD.ADV SWS08
D6526 11EQS04TA1
L6501 120U
C6512 0.01
C6522 6V220
SWS01 REW D6501 MA151WA
SWS02 PLAY
SWS03 FF D6502 MA151WA
SWS04 REC
SWS05 PAUSE/STILL D6503 MA151WA
SWS06 SLOW
SWS07 STOP D6504 MA151WA
SWS08 AUDIO DUB.
SWS09 EVQPAC09K
SWS10 EJECT D6505 MA151WA
SWS10 POWER
SWS11 TRAKING (-) EVQDS08 05G
SWS12 TRAKING (+) D6506 MA151WA
EVQDS805G
SWS13 RESET D6507 MA151WA
SWS14 TIME MODE
SWS15 TIMER D6508 MA151WA
SWS17 MEMORY ALARM SERCH
SWS16 MENU OFF MODE LOCK
SWS18 AUDIO SELECT D6526 MA151A
SWS19 SUMMER
D6510 MA151A
D6527 NTSC/PAL
R6565 C6531 C6530
TO MAIN PWB P6501 VJS3537A012G
D183 / D182,184
SUMMER_IN S/TAPE/VIDEO 1
ALARM_RST S/PB/REC 2
ALARM_IN S/PB/REW 3
GND 4
SW_12V 5
GND 6
GND 7
EMPHASIS(L) NC 8
GND 9
MIC(H) 10
MIC_IN 11
MIC_GND 12
SERIALIN
D182.184 ONLY
VR_CH1 R6501 VR6501
VR_CH2 R6502 VR6502
TO MAIN PWB P6502 VJS3537A020G
D183 / D182,184
NC VR_COM 1
NC VR_CH2 2
NC VR_CH1 3
NC AUDIO_GND 4
NC H_METEER_RST 5
NC CH2_HIFI(L) 6
NC CH1_HIFI(L) 7
NO_VIDEO(H) NC 8
OSD_DATA SER_PB(H) 9
ANALOG_IN 10
SCK_F 11
SDA_F 12
OSD_CLK SERIAL_IN 13
NC METER_CH2 14
NC METER_CH1 15
GND 16
CMP_B/W(L) NC 17
NON_SW_5.3V 18
OSD_CS SERIES_OUT 19
BACK_UP_5V 20
H_WET_RT
SERIAL_IN
SER_PB_H
R6572
R6561 CH2_L
R6560 CH1_L
NO_VIDEO
SCK_F
SDA_F
R6577 R6576
D182.184 ONLY
D183,D184 ONLY
R6557 R6556 R6555
D6522 D6521 D6520
R6554 R6553 R6552
S_T_V
S_P_REW
S_P_REC
C6582 C6583 C6584
D183 ONLY
D6524 D6523
D182,184 ONLY
IC6505 RESET
C6536 16V33
C6502 16V33
C6524 0.1
R6593 470
C6503 50V0.22
D182,184 NTSC ONLY
R6593 X6502 R6551
C6502 C6501 C6508
CT6501
R6589 3900
22P X6501
VSX0140-A
C6529 0.01
IC6510 UPD6263G5-T1
R6558 3300
R6559 3300
D183 ONLY
R6570 R6571
R6509 R6510 R6511 R6512 680
R6579 R6580 R6581 R6582 R6585 47K
IC6503
MUTE
1000P 47K 560K 47K 68P 4700
R6524 C6509 227
R6523 1N
C6510 C6511 227
D183,184 ONLY
GREEN
LCD BACK LIGHT
LD6501 LN043572P
R6527 330
DP6501
SEG1 SEG16 SEG17 SEG18 SEG19 SEG20 SEG3 SEG4 SEG5 SEG6 SEG7 SEG8 SEG9 SEG10 SEG11 SEG12 SEG13 SEG14 SEG15 COM0 COM1 COM2 COM3
IC6501
AN2 AN1 AN0 PB3 PB2 PB1 PB0 P33 P32 P31 P30 P23 P22 P21 P20 T10 INT2 INT1 INT0 SBI
TP6501 CLOCK
POWER LED CHP_ON(L) SW_ARM(L) AUTO-OFF LED STAND BY LED
S_T_V S_P_REW S_P_REC
AN3 AN4 AN5 AVSS AVREF VDD XT1 XT2 NC X1 X2 RESET P60 SERIES_OUT(OSD_CS) P61 CS P62 CLK P63 DAT P70 P71 P72 P73
SERIAL IN S_DATA S_CLK
S-VHS(H) VSR_ON(L) ND_VIDEO(H) 6H/4H
D182(L)/D184
SBO SCK INT4 P53 P52 P51 P50 VSS P43 P42 P41 P40 VLC2 VLC1 VLC0 BIAS COM3 COM2 COM1 COM0
R6566 R6562 R6563 R6564 R6575 R6578 R6574
D183 ONLY
D182,184 ONLY
D183 ONLY
STAND BY
ALARM
POWER
REC
QR6501
QR6502
QR6503 MRN2402
LD6501 LNB1RCPHL
LD6502 LNB1RCPHL
LD6503 LNB1RCPHL
LD6504 MRN2402
R6513 R6514 R6515 R6516 R6591 R6592 R6593 220 75
47K
R6525 R6535 R6587 R6588
D182,184 ONLY
R6534 R6573 R6574
D183 ONLY
R6586 R6585 R6584 R6583 R6590 R6589 R6591 R6592 R6593 R6594 R6595 R6596 R6597 R6598 R6599 R6600 R6601 R6602 R6603 R6604 R6605 R6606 R6607 R6608 R6609 R6610 R6611 R6612 R6613 R6614 R6615 R6616 R6617 R6618 R6619 R6620 R6621 R6622 R6623 R6624 R6625 R6626 R6627 R6628 R6629 R6630

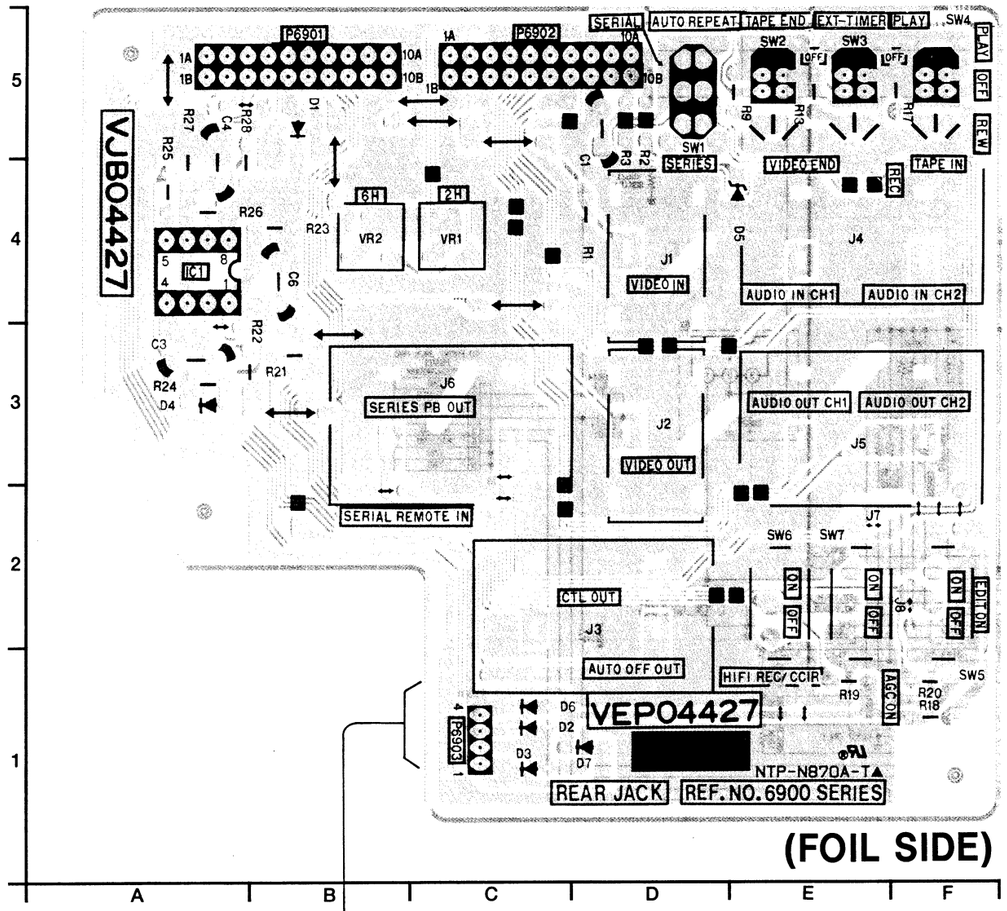
\ACK SCHEMATIC DIAGRAM

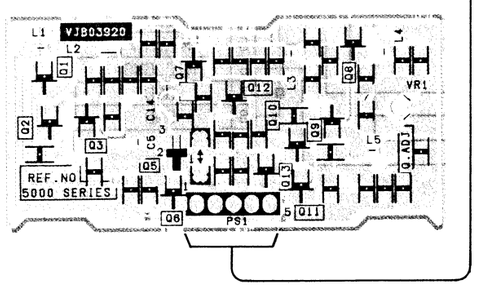


FRONT JACK



6-13. REAR JACK C.B.A.

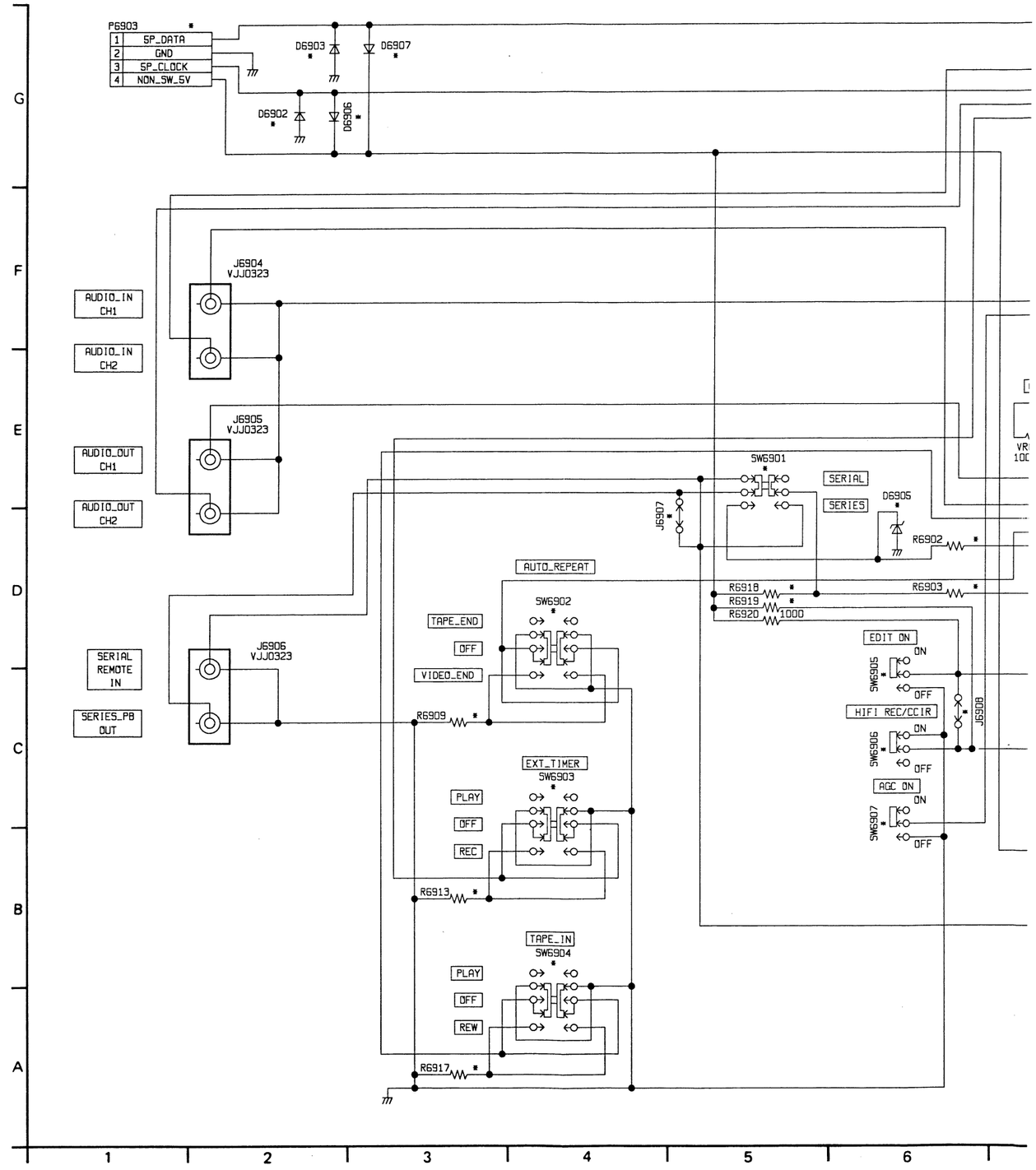




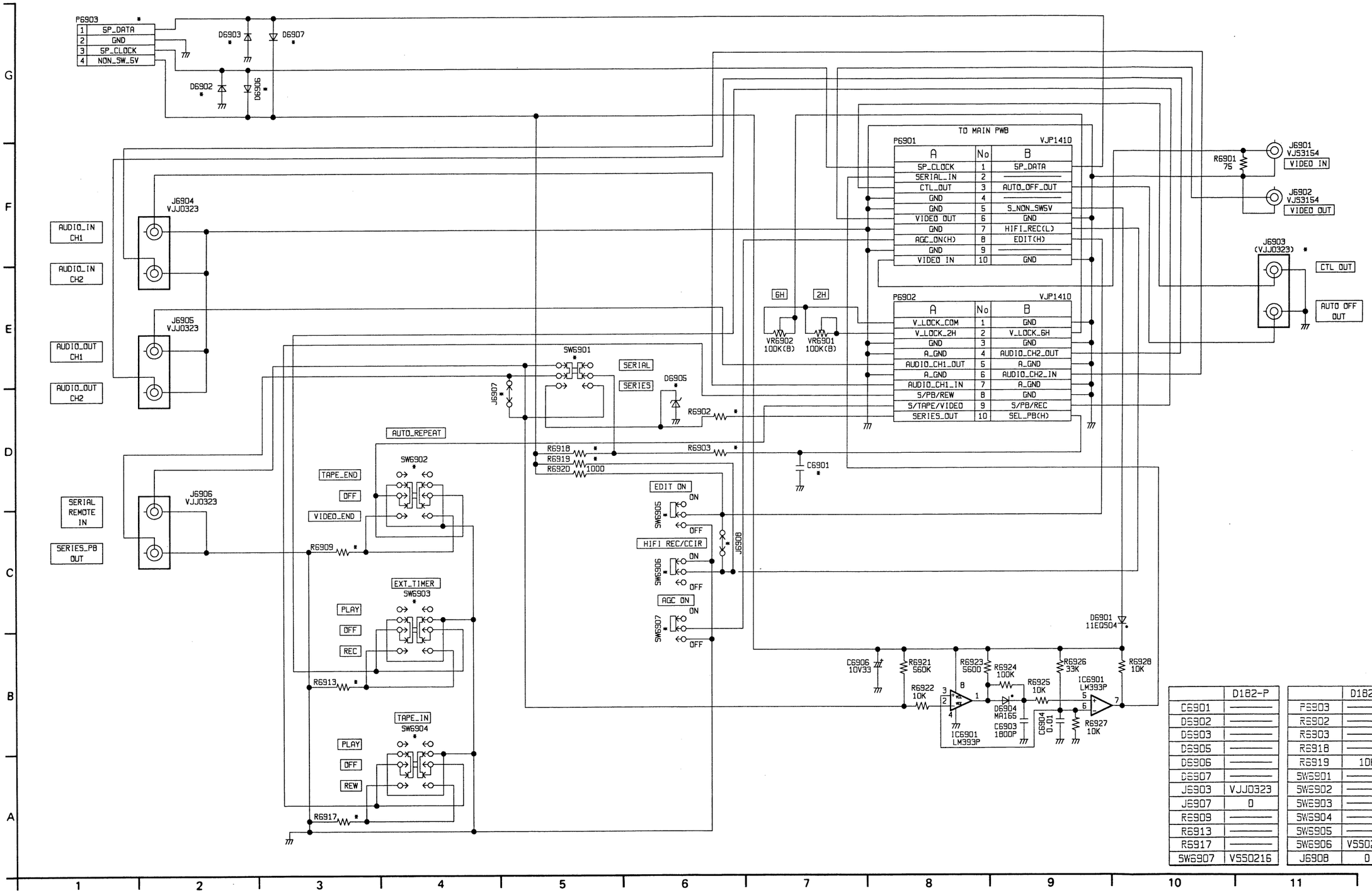
REAR JACK (VEP04427A)			
FOIL SIDE			
INTEGRATED CIRCUITS		ADJUSTMENT	
IC6901	A-4	VR6901	C-4
		VR6902	B-4
CONNECTOR		SWITCH	
P6901	B-5	SW6906	E-2
P6902	C-5	SW6907	E-2
P6903	C-1		

ADDRESS INFORMATION

6-14. REAR JACK SCHEMATIC DIAGRAM



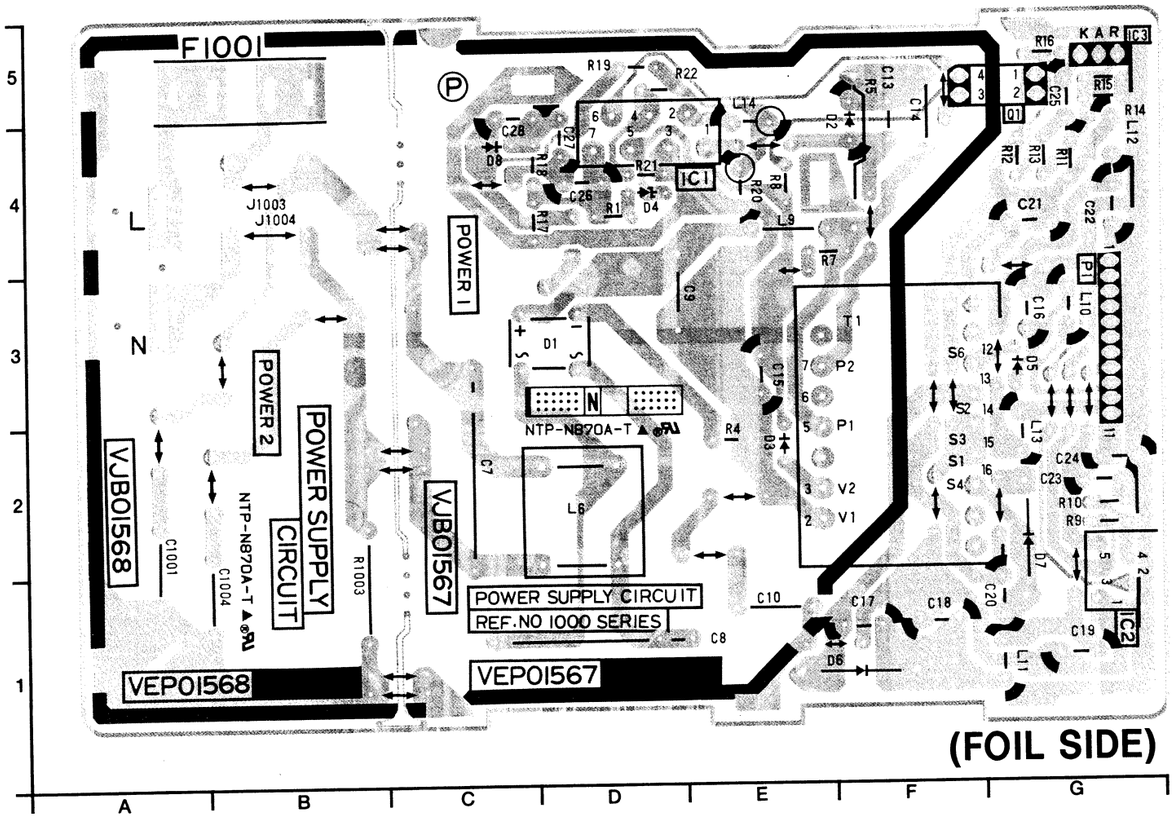
6-14. REAR JACK SCHEMATIC DIAGRAM



	D182-P
C6901	
D6902	
D6903	
D6905	
D6906	
D6907	
J6903	VJJ0323
J6907	0
R6909	
R6913	
R6917	
SW6907	VSS0216

	D182-P
R6903	
R6902	
R6903	
R6918	
R6919	10K
SW6901	
SW6902	
SW6903	
SW6904	
SW6905	
SW6906	VSS0216
J6908	0

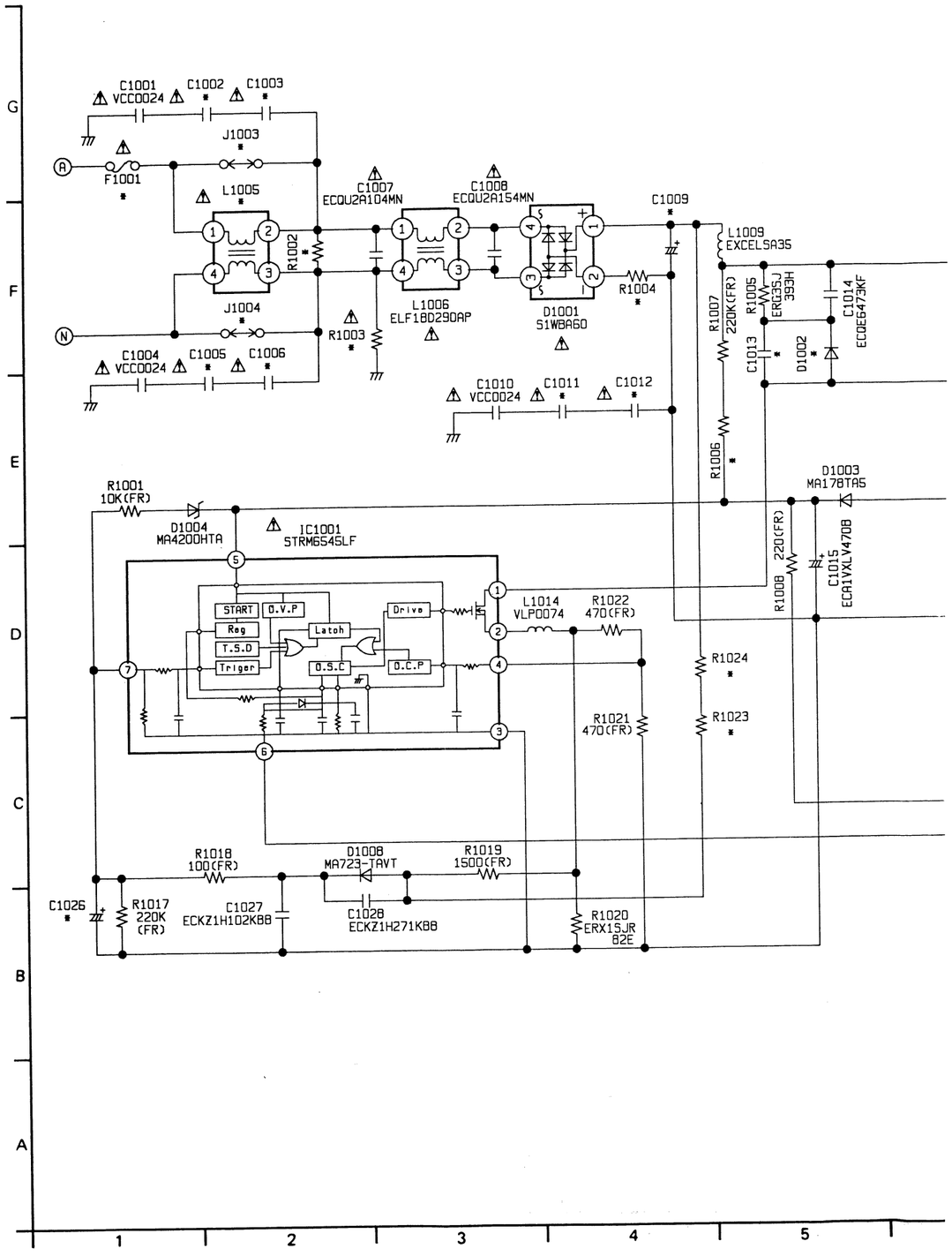
6-15. POWER 1 & 2 C.B.A.



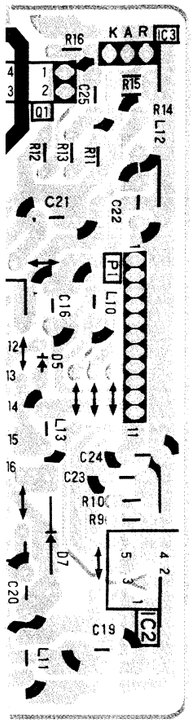
POWER 1 (VEP01567A) POWER 2 (VEP01568A)	
FOIL SIDE	
TRANSISTOR	
Q1001	G-5
INTEGRATED CIRCUITS	
IC1001	D-4
IC1002	G-1
IC1003	G-5
CONNECTOR	
P1001	G-3

ADDRESS INFORMATION

6-16. POWER SCHEMATIC DIAGRAM



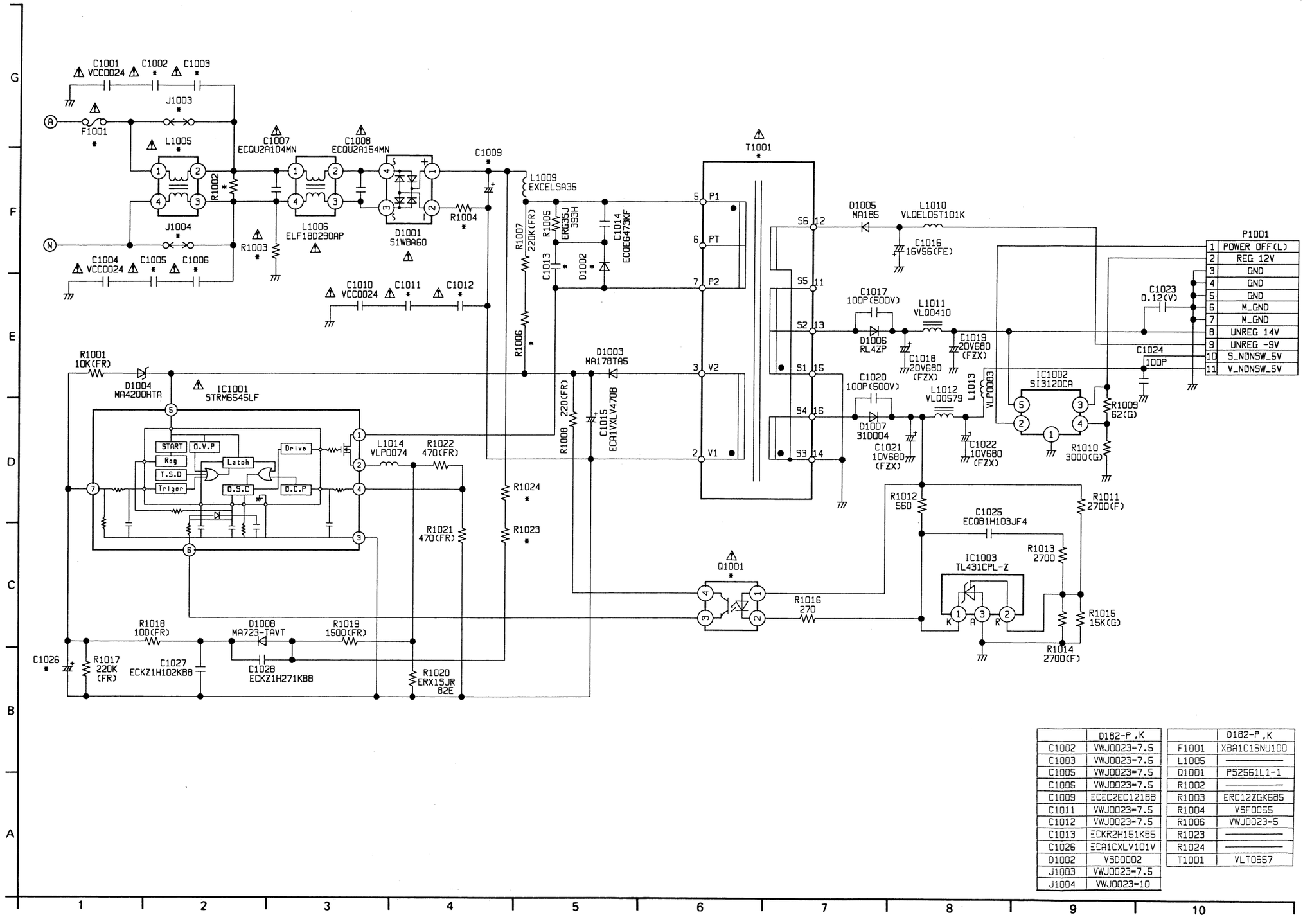
6-16. POWER SCHEMATIC DIAGRAM



OIL SIDE)

G

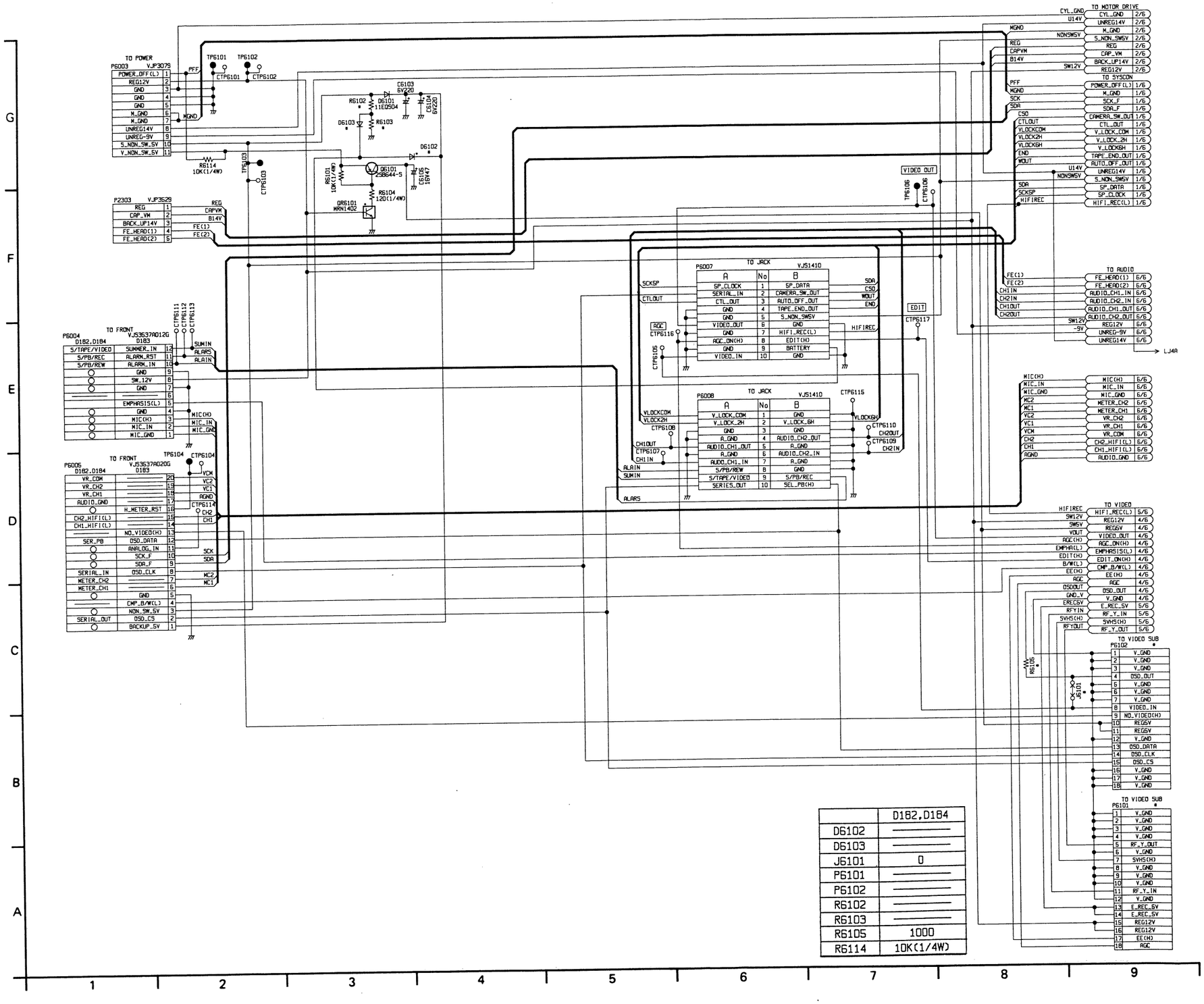
1567A)
1568A)
R
G-5
RCUITS
D-4
G-1
G-5
R
G-3



	D182-P,K
C1002	VWJ0023-7.5
C1003	VWJ0023-7.5
C1005	VWJ0023-7.5
C1006	VWJ0023-7.5
C1009	ECEC2EC1218B
C1011	VWJ0023-7.5
C1012	VWJ0023-7.5
C1013	ECKR2H151KB5
C1026	ECA1CXLV101V
D1002	VSD0002
J1003	VWJ0023-7.5
J1004	VWJ0023-10

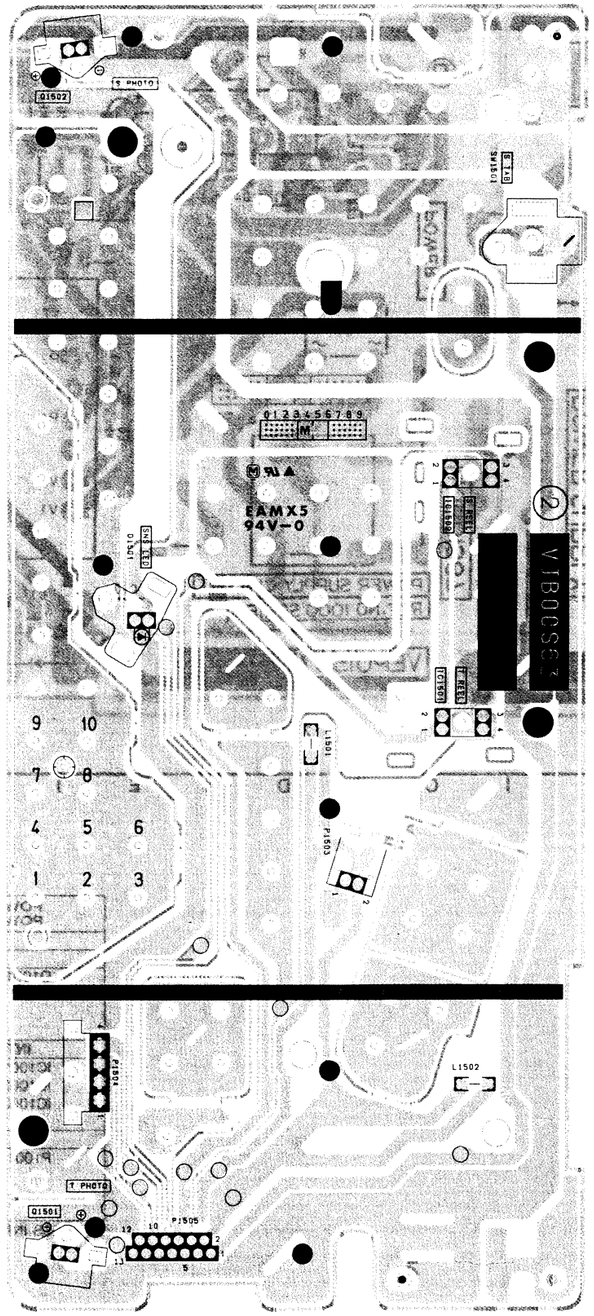
	D182-P,K
F1001	XBA1C16NU100
L1005	————
Q1001	PS2561L1-1
R1002	————
R1003	ERC12ZGK685
R1004	V5F0055
R1006	VWJ0023-5
R1023	————
R1024	————
T1001	VLT0657

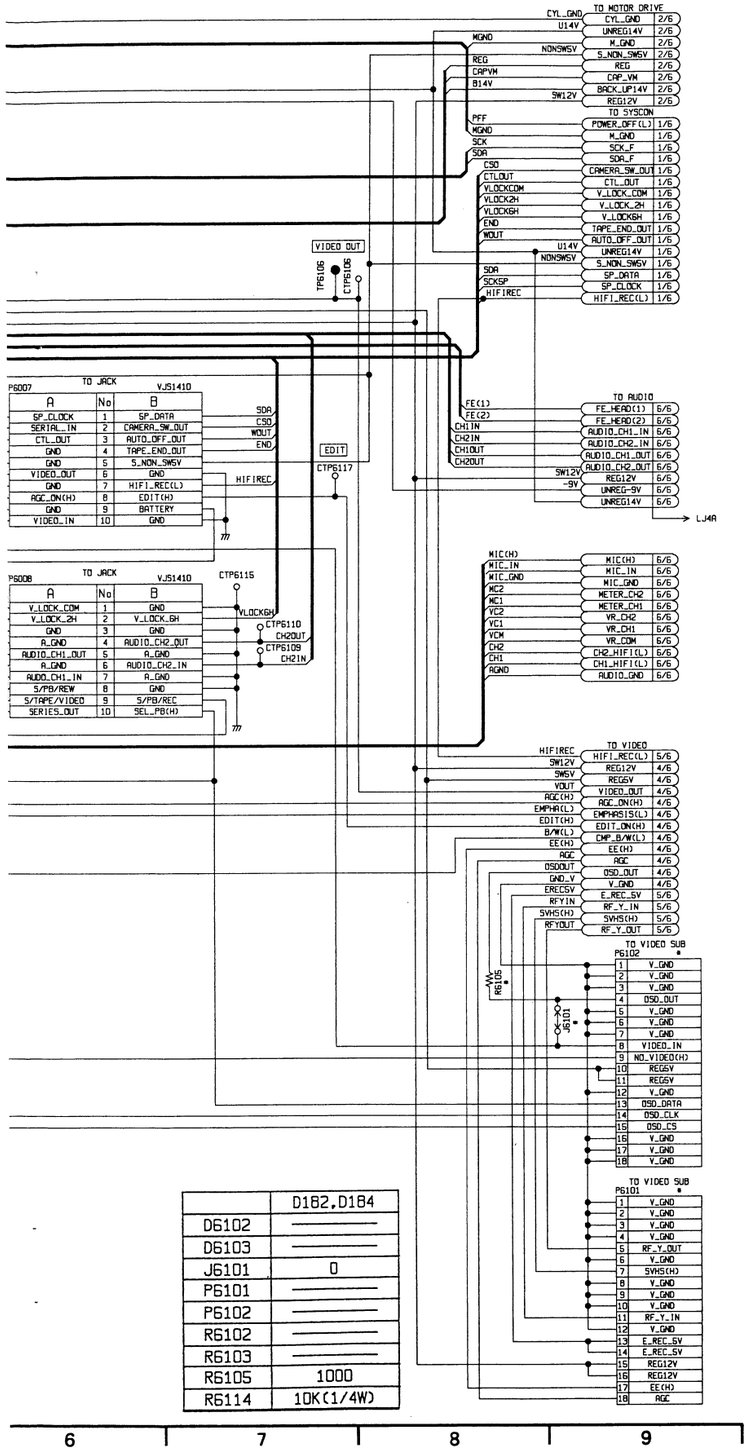
6-17. INTERFACE SCHEMATIC DIAGRAM



	D182,D184
D6102	——
D6103	——
J6101	0
P6101	——
P6102	——
R6102	——
R6103	——
R6105	1000
R6114	10K(1/4W)

6-18. MECHANICAL CONNECTION C.B.A.

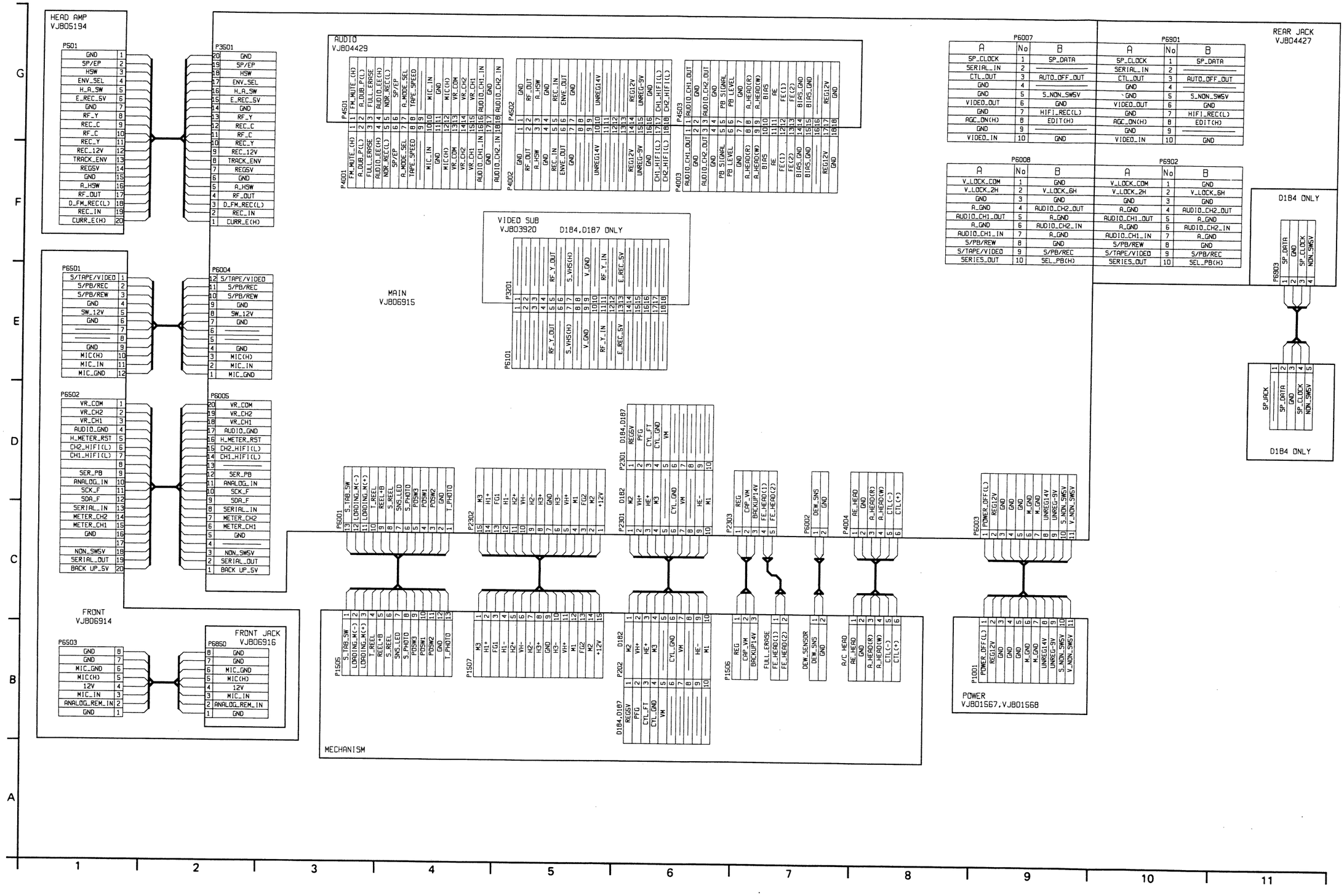




	D182,D184
D6102	——
D6103	——
J6101	0
P6101	——
P6102	——
R6102	——
R6103	——
R6105	1000
R6114	10K(1/4W)

6 7 8 9

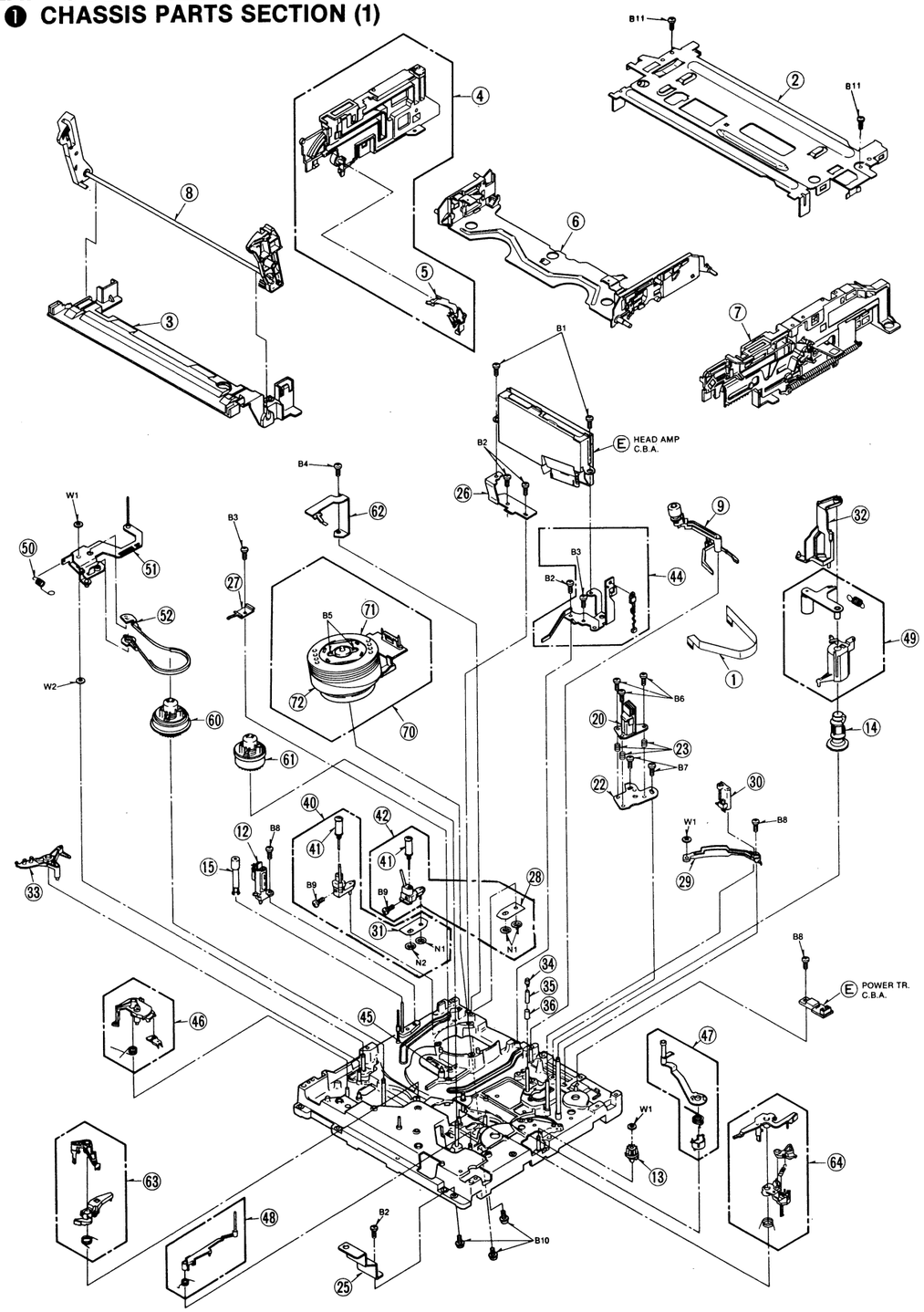
6-19. INTERCONNECTION SCHEMATIC DIAGRAM



7-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST

EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST

❶ CHASSIS PARTS SECTION (1)



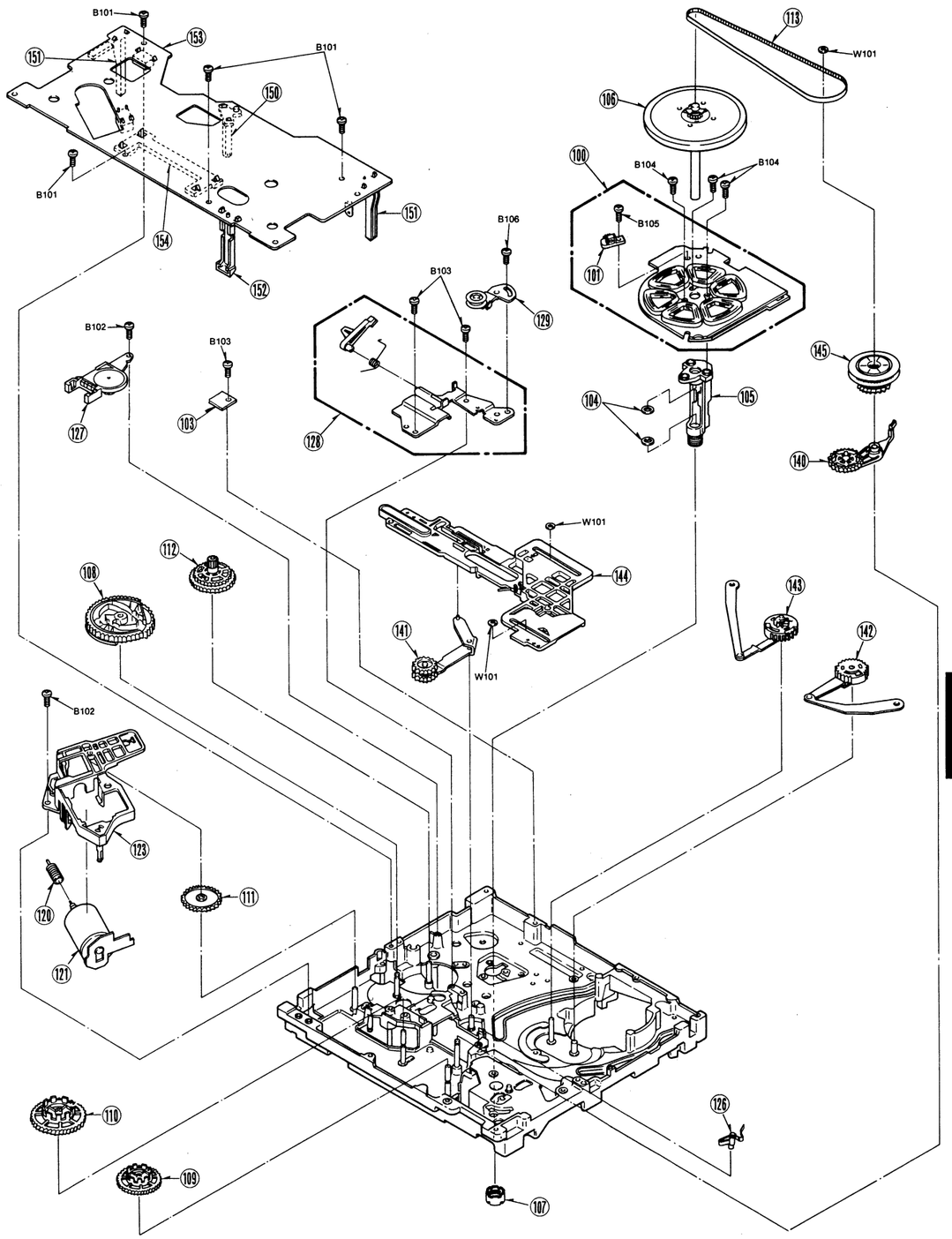
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VWJ0653	FLEXIBLE CABLE (6P)	1	
2(1)	VMA8644	TOP PLATE	1	
3(1)	VMA8787	CASSETTE GUIDE	1	
4(1)	VXA4660	SIDE PLATE (L) UNIT	1	
5(1)	VXL2250	OPENER LEVER UNIT	1	
6(1)	VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7(1)	VXA4806	SIDE PLATE (R) UNIT	1	
8(1)	VXP1339	MAIN SHAFT UNIT	1	
9(1)	VXL2251	CLEANER ARM UNIT	1	
12(1)	VBS0050	FE HEAD	1	
13(1)	VDG0871	CARRIAGE CONNECTION GEAR	1	
14(1)	VDG0886	PINCH CAM GEAR	1	
15(1)	VXP1402	IMPEDANCE ROLLER UNIT	1	
20(1)	VED0213	A/C HEAD (1) UNIT	1	
22(1)	VMA8624	A/C HEAD BASE	1	
23(1)	VMB2515	A/C HEAD SPRING	3	
25(1)	VMA8761	MOUNT ANGLE	1	
26(1)	VMA8763	HEAD AMP MOUNT ANGLE (L)	1	
27(1)	VMC0917	EARTH SPRING	1	
28(1)	VMA8874	INCLIND BASE HOLDER (S)	1	
29(1)	VMD2078	P5 STOPPER BASE	1	
30(1)	VXA4927	P5 POST STOPPER	1	
31(1)	VMA8873	INCLIND BASE HOLDER (T)	1	
32(1)	VMD2101	OPENER PIECE	1	
33(1)	VML2776	TENSION SPRING ARM	1	
34(1)	VMX1544	P4 UPPER LIMITER	1	
35(1)	VMX2175	P4 SLEEVE	1	
36(1)	VMX2176	P4 LOWER LIMITER	1	
40(1)	VXA4982KIT	INCLIND BASE (S) UNIT	1	
41(1)	VXP1415	ROLLER POST	2	
42(1)	VXA4984KIT	INCLIND BASE (T) UNIT	1	
44(1)	VXA4869	HEAD AMP MOUNT ANGLE (R) U.	1	
45(1)	VMS5383	CASSETTE POSITION FIXTURE	1	
46(1)	VXL2310	REVIEW ARM UNIT	1	
47(1)	VXL2306	P5 ARM UNIT	1	
48(1)	VXL2243	TAKE UP TENSION REGULATOR ARM UNIT	1	
49(1)	VXL2246	PINCH ARM UNIT	1	
50(1)	VMB2434	TENSION SPRING	1	
51(1)	VXL2309	TENSION ARM (1) UNIT	1	
52(1)	VXZ0310	TENSION BAND UNIT	1	
60(1)	VXR0221	SUPPLY REEL TABLE UNIT	1	
61(1)	VXR0222	TAKE UP REEL TABLE UNIT	1	
62(1)	VXS0114	EARTH PLATE	1	
63(1)	VXZ0312	SUPPLY BRAKE ARM UNIT	1	
64(1)	VXZ0313	TAKE UP BRAKE ARM UNIT	1	
70(1)	VEG1107	CYLINDER UNIT	1	
71(1)	VEH0644	UPPER CYLINDER UNIT	1	
72(1)	VJR0082	RT TERMINAL	1	
B1	VHD0773	SCREW	2	
B2	XTV26+6F	SCREW	4	
B3	XTV26+4F	SCREW	2	
B4	XTN3+6FFZ	SCREW	1	
B5	VHD0425	SCREW	2	
B6	VHD0762	SCREW	3	
B7	XTV26+6FZ	SCREW	2	
B8	XTV26+8F	SCREW	3	
B9	VHD0760	SCREW	2	
B10	VHD0342	SCREW	3	
N1	VHN0192	NUT	3	
N2	VHN0193	NUT	1	
W1	VMX2208	WASHER	3	
W2	XWGV26D5G	WASHER	1	
BI1	XTB26+8G	SCREW	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
100(2)	VEK5927	STATOR UNIT	1	
101(2)	VBK0061	FG HEAD	1	
103(2)	VMA8930	ROTOR STOPPER	1	
104(2)	VMX1927	OIL SEAL	2	
105(2)	VXD0140	HOUSING UNIT	1	
106(2)	VXP1471	ROTOR UNIT	1	
107(2)	VXQ0297	THRUST SCREW UNIT	1	
108(2)	VDG0913	MAIN CAM GEAR	1	
109(2)	VDG0861	SUPPLY REEL GEAR	1	
110(2)	VDG0862	TAKE UP REEL GEAR	1	
111(2)	VDG0868	WORM WHEEL GEAR	1	
112(2)	VDG0885	SUB CAM GEAR	1	
113(2)	VDV0235	TIMING BELT	1	
120(2)	VDG0866	WORM GEAR	1	
121(2)	VEM0427	LOADING MOTOR (1) UNIT	1	
123(2)	VMD1942	MOTOR BRACKET	1	
126(2)	VML2725	IDLER CONTROL LEVER	1	
127(2)	VSS0365	MODE SW	1	
128(2)	VXA4797	SS BRAKE BASE UNIT	1	
129(2)	VXA4799	TENSION ROLLER UNIT	1	
140(2)	VXL2229	IDLER ARM UNIT	1	
141(2)	VXL2230	DIRECT LEVER UNIT	1	
142(2)	VXL2299	SUPPLY LOADING ARM UNIT	1	
143(2)	VXL2300	TAKE UP LOADING ARM UNIT	1	
144(2)	VXL2307	MAIN LEVER UNIT	1	
145(2)	VXP1409	CENTRE CLUTCH	1	
150(2)	VMD1926	LED HOLDER	1	
151(2)	VMD1927	PHOTO TRANSISTOR HOLDER	2	
152(2)	VES0695	SAFETY TAB SW	1	
153(2)	VJB00S63	MECHANISM CONNECTION C.B.	1	ELECTRICAL PARTS ON THE C.B.A.IS LISTED ON ELECTRICAL PARTS LIST.
154(2)	VMD2029	REEL SHAFT GUIDE	1	
B101	VHD0772	SCREW	4	
B102	XTV26+8F	SCREW	2	
B103	XTV26+6F	SCREW	3	
B104	VHD0753	SCREW	3	
B105	VHD0754	SCREW	1	
B106	XSB26+4FZ	SCREW	1	
W101	VMX2208	WASHER	3	

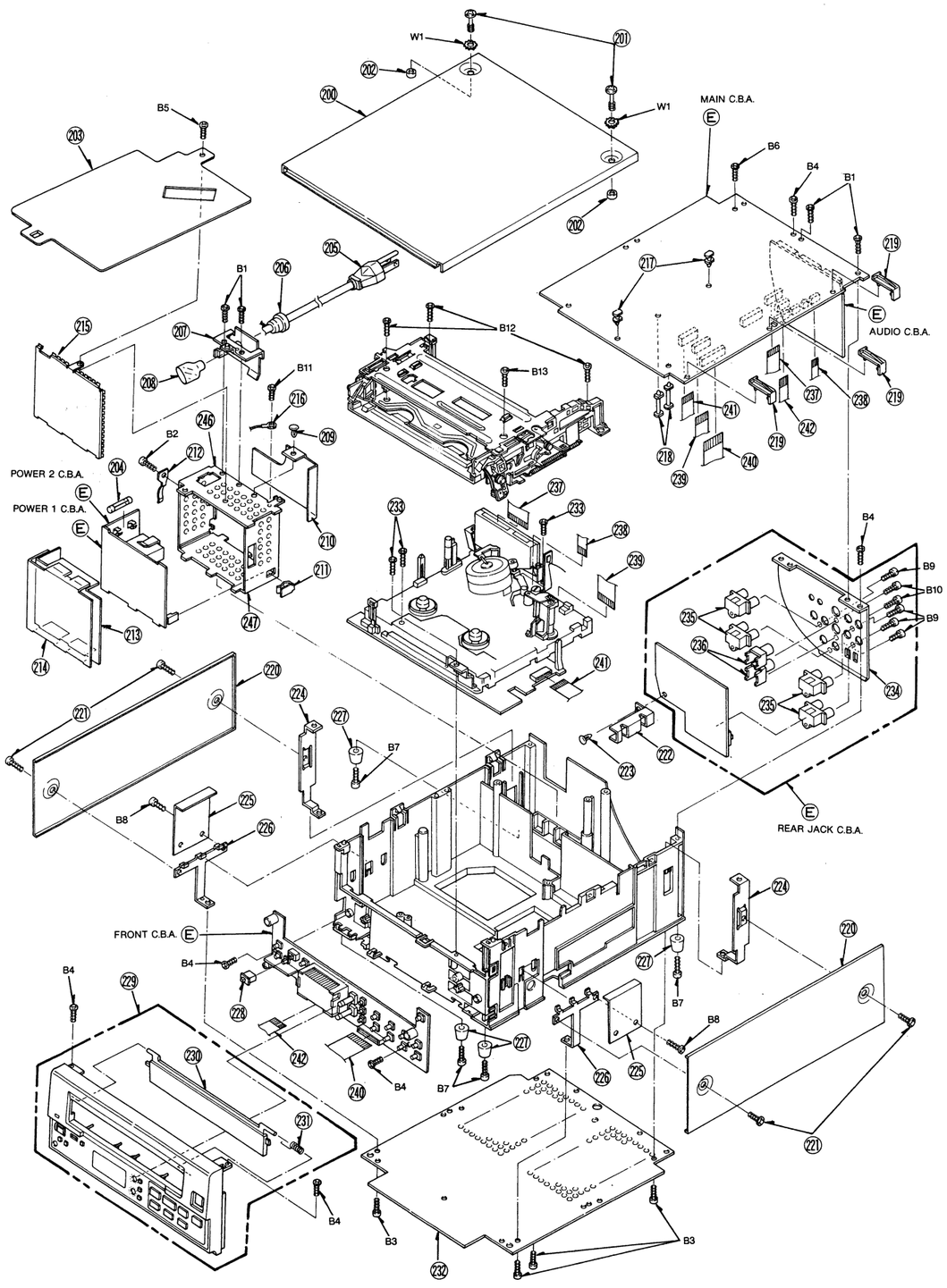
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VWJ0653	FLEXIBLE CABLE (6P)	1	
2(1)	VMA8644	TOP PLATE	1	
3(1)	VMA8787	CASSETTE GUIDE	1	
4(1)	VXA4660	SIDE PLATE (L) UNIT	1	
5(1)	VXL2250	OPENER LEVER UNIT	1	
6(1)	VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7(1)	VXA4806	SIDE PLATE (R) UNIT	1	
8(1)	VXP1339	MAIN SHAFT UNIT	1	
9(1)	VXL2251	CLEANER ARM UNIT	1	
12(1)	VBS0050	FE HEAD	1	
13(1)	VDG0871	CARRIAGE CONNECTION GEAR	1	
14(1)	VDG0886	PINCH CAM GEAR	1	
15(1)	VXP1402	IMPEDANCE ROLLER UNIT	1	
20(1)	VED0213	A/C HEAD (1) UNIT	1	
22(1)	VMA8624	A/C HEAD BASE	1	
23(1)	VMB2515	A/C HEAD SPRING	3	
25(1)	VMA8761	MOUNT ANGLE	1	
26(1)	VMA8763	HEAD AMP MOUNT ANGLE (L)	1	
27(1)	VMC0917	EARTH SPRING	1	
28(1)	VMA8874	INCLIND BASE HOLDER (S)	1	
29(1)	VMD2078	P5 STOPPER BASE	1	
30(1)	VXA4927	P5 POST STOPPER	1	
31(1)	VMA8873	INCLIND BASE HOLDER (T)	1	
32(1)	VMD2101	OPENER PIECE	1	
33(1)	VML2776	TENSION SPRING ARM	1	
34(1)	VMX1544	P4 UPPER LIMITER	1	
35(1)	VMX2175	P4 SLEEVE	1	
36(1)	VMX2176	P4 LOWER LIMITER	1	
40(1)	VXA4982KIT	INCLIND BASE (S) UNIT	1	
41(1)	VXP1415	ROLLER POST	2	
42(1)	VXA4984KIT	INCLIND BASE (T) UNIT	1	
44(1)	VXA4869	HEAD AMP MOUNT ANGLE (R) U.	1	
45(1)	VMS5383	CASSETTE POSITION FIXTURE	1	
46(1)	VXL2310	REVIEW ARM UNIT	1	
47(1)	VXL2306	P5 ARM UNIT	1	
48(1)	VXL2243	TAKE UP TENSION REGULATOR ARM UNIT	1	
49(1)	VXL2246	PINCH ARM UNIT	1	
50(1)	VMB2434	TENSION SPRING	1	
51(1)	VXL2309	TENSION ARM (1) UNIT	1	
52(1)	VXZ0310	TENSION BAND UNIT	1	
60(1)	VXR0221	SUPPLY REEL TABLE UNIT	1	
61(1)	VXR0222	TAKE UP REEL TABLE UNIT	1	
62(1)	VXS0114	EARTH PLATE	1	
63(1)	VXZ0312	SUPPLY BRAKE ARM UNIT	1	
64(1)	VXZ0313	TAKE UP BRAKE ARM UNIT	1	
70(1)	VEG1107	CYLINDER UNIT	1	
71(1)	VEH0644	UPPER CYLINDER UNIT	1	
72(1)	VJR0082	RT TERMINAL	1	
B1	VHD0773	SCREW	2	
B2	XTV26+6F	SCREW	4	
B3	XTV26+4F	SCREW	2	
B4	XTN3+6FFZ	SCREW	1	
B5	VHD0425	SCREW	2	
B6	VHD0762	SCREW	3	
B7	XTV26+6FZ	SCREW	2	
B8	XTV26+8F	SCREW	3	
B9	VHD0760	SCREW	2	
B10	VHD0342	SCREW	3	
N1	VHN0192	NUT	3	
N2	VHN0193	NUT	1	
W1	VMX2208	WASHER	3	
W2	XWGV26D5G	WASHER	1	
B11	XTB26+8G	SCREW	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
100(2)	VEK5927	STATOR UNIT	1	
101(2)	VBK0061	FG HEAD	1	
103(2)	VMA8930	ROTOR STOPPER	1	
104(2)	VMX1927	OIL SEAL	2	
105(2)	VXD0140	HOUSING UNIT	1	
106(2)	VXP1471	ROTOR UNIT	1	
107(2)	VXQ0297	THRUST SCREW UNIT	1	
108(2)	VDG0913	MAIN CAM GEAR	1	
109(2)	VDG0861	SUPPLY REEL GEAR	1	
110(2)	VDG0862	TAKE UP REEL GEAR	1	
111(2)	VDG0868	WORM WHEEL GEAR	1	
112(2)	VDG0885	SUB CAM GEAR	1	
113(2)	VDV0235	TIMING BELT	1	
120(2)	VDG0866	WORM GEAR	1	
121(2)	VEM0427	LOADING MOTOR (1) UNIT	1	
123(2)	VMD1942	MOTOR BRACKET	1	
126(2)	VML2725	IDLER CONTROL LEVER	1	
127(2)	VSS0365	MODE SW	1	
128(2)	VXA4797	SS BRAKE BASE UNIT	1	
129(2)	VXA4799	TENSION ROLLER UNIT	1	
140(2)	VXL2229	IDLER ARM UNIT	1	
141(2)	VXL2230	DIRECT LEVER UNIT	1	
142(2)	VXL2299	SUPPLY LOADING ARM UNIT	1	
143(2)	VXL2300	TAKE UP LOADING ARM UNIT	1	
144(2)	VXL2307	MAIN LEVER UNIT	1	
145(2)	VXP1409	CENTRE CLUTCH	1	
150(2)	VMD1926	LED HOLDER	1	
151(2)	VMD1927	PHOTO TRANSISTOR HOLDER	2	
152(2)	VES0695	SAFETY TAB SW	1	
153(2)	VJB00S63	MECHANISM CONNECTION C.B.	1	ELECTRICAL PARTS ON THE C.B.A.IS LISTED ON ELECTRICAL PARTS LIST.
154(2)	VMD2029	REEL SHAFT GUIDE	1	
B101	VHD0772	SCREW	4	
B102	XTV26+8F	SCREW	2	
B103	XTV26+6F	SCREW	3	
B104	VHD0753	SCREW	3	
B105	VHD0754	SCREW	1	
B106	XSB26+4FZ	SCREW	1	
W101	VMX2208	WASHER	3	

❷ CHASSIS PARTS SECTION (2)



❸ CASING PARTS SECTION



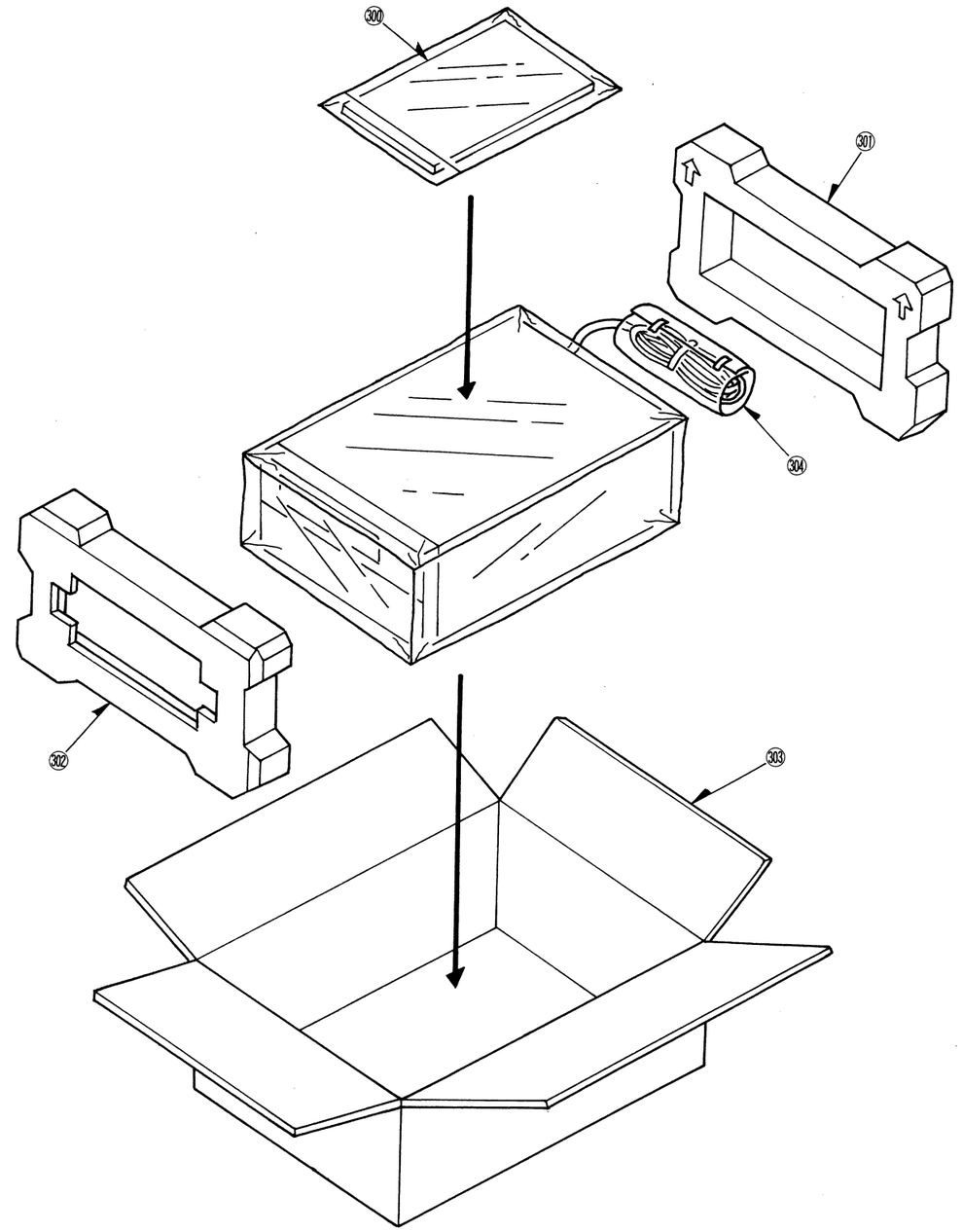
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
200(3)	VGM1045	TOP PANEL	1	
201(3)	VHD0222	SCREW	2	
202(3)	VMX2248	SPACER	2	
203(3)	VSC4044	SHIELD SEAT (B)	1	
204(3)	XBA1C16NU100	FUSE 1.6A/125V	1	<!>
205(3)	VJA0437	AC CORD	1	<!>
206(3)	VMX0936	AC CORD BUSHING	1	<!>
207(3)	VMP4220	POWER PLATE	1	
208(3)	VMX0237	AC CORD COVER	1	<!>
209(3)	VJF0649	RIVET	1	
210(3)	VMZ2222	BARRIER	1	
211(3)	VMC0357	TR HOLDER SPRING	1	
212(3)	VMC0525	EARTH SPRING	1	
213(3)	VMZ2243	BARRIER	1	
214(3)	VSC3999	BARRIER	1	
215(3)	VSC3959	SHIELD PLATE	1	
216(3)	VJH12	EARTH TERMINAL	1	
217(3)	VKC0295	SPACER	2	
218(3)	VKC0422	SPACER	2	
219(3)	VKC0421	HINGE	3	
220(3)	VGM1046	SIDE PANEL	2	
221(3)	VHD0305	SCREW	4	
222(3)	VJF1094	P.C.BOARD HOLDER	1	
223(3)	VJF0649	RIVET	1	
224(3)	VMP4218	EARTH ANGLE (B)	2	
225(3)	VSC4046	SHIELD SEAT (C)	2	
226(3)	VMP4217	EARTH ANGLE (A)	2	
227(3)	VKA0133	RUBBER FOOT	4	
228(3)	VGU5582	SLIDE SW SHEET	1	
229(3)	VYP5445	FRONT PANEL UNIT	1	
230(3)	VKF2127	BLINDER PANEL	1	
231(3)	VMB2521	BLINDER PANEL SPRING	1	
232(3)	VKU0390	BOTTOM PLATE	1	
233(3)	VHD0168	SCREW	3	
234(3)	VJH0718	REAR JACK PANEL	1	
235(3)	VJJ0323	RCA PIN JACK	4	
236(3)	VJS3154	BNC CONNECTOR	2	
237(3)	VWJ20AW470B0	FLEXIBLE CABLE	1	
238(3)	VWJ0785.	FLEXIBLE CABLE	1	
239(3)	VWJ15AW510B0	FLEXIBLE CABLE	1	
240(3)	VWJ20AW385B0	FLEXIBLE CABLE	1	
241(3)	VWJ13AW200B0	FLEXIBLE CABLE	1	
242(3)	VWJ12AW610B0	FLEXIBLE CABLE	1	
243(3)	VSC3957	SHIELD CASE	1	
244(3)	VSC3958	SHIELD CASE	1	
W1	XWC4BFY	WASHER	2	
B1	XTV3+6F	SCREW	4	
B2	XTV26+4F	SCREW	1	
B3	XTB3+10F	SCREW	4	
B4	XTV3+10GR	SCREW	6	
B5	XTV3+6FR	SCREW	1	
B6	XYE3+EF8FR	SCREW	1	
B7	XTV3+14J	SCREW	4	
B8	XTV3+6J	SCREW	2	
B9	XTV3+10GFZ	SCREW	4	
B10	XTV3+8FFZ	SCREW	2	
B11	XYE4+EF6	SCREW	1	
B12	XTV26+8FR	SCREW	3	
B13	XTV26+10F	SCREW	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
300(4)	VQT5491	OPERATING INSTRUCTIONS	1	
301(4)	VPN3798	CUSHION (R)	1	
302(4)	VPN3173	CUSHION (F)	1	
303(4)	VPG7232	PACKING	1	
304(4)	VPF0136	CORD PROTECTION SEAT	1	

o.		Part No.	Part Name & Description	Pcs	Remarks
)		VGM1045	TOP PANEL	1	
)		VHD0222	SCREW	2	
)		VMX2248	SPACER	2	
)		VSC4044	SHIELD SEAT (B)	1	
)		XBA1C16NU100	FUSE 1.6A/125V	1	<!>
)		VJA0437	AC CORD	1	<!>
)		VMX0936	AC CORD BUSHING	1	<!>
)		VMP4220	POWER PLATE	1	
)		VMX0237	AC CORD COVER	1	<!>
)		VJF0649	RIVET	1	
)		VMZ2222	BARRIER	1	
)		VMC0357	TR HOLDER SPRING	1	
)	•	VMC0525	EARTH SPRING	1	
)		VMZ2243	BARRIER	1	
)		VSC3999	BARRIER	1	
)		VSC3959	SHIELD PLATE	1	
)		VJH12	EARTH TERMINAL	1	
)		VKC0295	SPACER	2	
)		VKC0422	SPACER	2	
)		VKC0421	HINGE	3	
)		VGM1046	SIDE PANEL	2	
)		VHD0305	SCREW	4	
)		VJF1094	P.C.BOARD HOLDER	1	
)		VJF0649	RIVET	1	
)		VMP4218	EARTH ANGLE (B)	2	
)		VSC4046	SHIELD SEAT (C)	2	
)		VMP4217	EARTH ANGLE (A)	2	
)		VKA0133	RUBBER FOOT	4	
)		VGU5582	SLIDE SW SHEET	1	
)		VYP5445	FRONT PANEL UNIT	1	
)		VKF2127	BLINDER PANEL	1	
)		VMB2521	BLINDER PANEL SPRING	1	
)		VKU0390	BOTTOM PLATE	1	
)		VHD0168	SCREW	3	
)		VJH0718	REAR JACK PANEL	1	
)		VJJ0323	RCA PIN JACK	4	
)		VJS3154	BNC CONNECTOR	2	
)		VWJ20AW470B0	FLEXIBLE CABLE	1	
)		VWJ0785.	FLEXIBLE CABLE	1	
)		VWJ15AW510B0	FLEXIBLE CABLE	1	
)		VWJ20AW385B0	FLEXIBLE CABLE	1	
)		VWJ13AW200B0	FLEXIBLE CABLE	1	
)		VWJ12AW610B0	FLEXIBLE CABLE	1	
)		VSC3957	SHIELD CASE	1	
)		VSC3958	SHIELD CASE	1	
		XWC4BFY	WASHER	2	
		XTV3+6F	SCREW	4	
		XTV26+4F	SCREW	1	
		XTB3+10F	SCREW	4	
		XTV3+10GR	SCREW	6	
		XTV3+6FR	SCREW	1	
		XYE3+EF8FR	SCREW	1	
		XTV3+14J	SCREW	4	
		XTV3+6J	SCREW	2	
		XTV3+10GFZ	SCREW	4	
		XTV3+8FFZ	SCREW	2	
		XYE4+EF6	SCREW	1	
		XTV26+8FR	SCREW	3	
		XTV26+10F	SCREW	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
300(4)	VQT5491	OPERATING INSTRUCTIONS	1	
301(4)	VPN3798	CUSHION (R)	1	
302(4)	VPN3173	CUSHION (F)	1	
303(4)	VPG7232	PACKING	1	
304(4)	VPF0136	CORD PROTECTION SEAT	1	

❹ PACKING PARTS SECTION



7-2. ELECTRICAL REPLACEMENT PARTS LIST

1. ● Be sure to make your orders of replacement parts according to this list.
   ● "<R>" in Remark column indicates recommended parts.
   ● "<M>" in Remark column indicates needed in the periodical maintenance..
2. IMPORTANT SAFETY NOTICE
   Components indentified by "<!>" have special characteristics important for safety.
   When replacing any of these components, use only the original ones.
   Meaning of symbol "<!>" on this parts list is exactly the same as symbol⚠on Schematic and Circuit Board Diagrams.
3. Unless otherwise specified;
   All resistors are in (Ω), K=1,000Ω, M=1,000kΩ.
   All capacitors are in (F), U=10^{-6} F, P=10^{-12} F.
4. ITEM NUMBERS WITH CAPITAL LETER E
   Item numbers woth capital leter E (Example: E1, E2, ...) in Ref. no. column mean that the parts are listed with the E item numbers in the exploded views.
5. The main assembled parts are shown below C.B.A. marked with "■".
6. When ordering parts, use parts No. only form Part No. column.
7. Printed circuit board assembly with mark (RTL) is no longer available after discontinuation of the product.
8. Explanation of part number

《 CAPACITOR 》

□□□□□□□□□□□□□□

Type Rated Volt. Capacitance Value

Type

Type	Delectric
ECA ECE ECS ECO	ELECTROLYTIC CAPACITOR
ECC ECF ECK ECU	CERAMIC CAPACITOR
ECH ECQ ECW	PLASTIC FILM CAPACITOR

Rated Volt.

Code	0G	0J	1A	1C	1D	1E	1V	1H	1J	1K
W.V. (V)	4	6.3	10	16	20	25	35	50	63	80

Code	2A	2C	2P	2D	2E	2F	2V	2G	2W	2H
W.V. (V)	100	160	180	200	250	315	350	400	450	500

Capacitance Value

The 1st 2 figures are actual values and the 3rd denotes the number of zero.
"R" denotes the decimal point and all figures are the actual number with "R".
※ Unit Electrolytic capacitor ----- μF
Ceramic capacitor ----- pF
Plastic film capacitor ----- pF

Example : ECEA1HU221 → ELECTCTROYTIC CAPACITOR 50V 220μF

《 RESISTOR 》

□□□□□□□□□□□□□□

Type Rated Power Resistance Value

Type

Type	Delectric
ERD	CARBON RESISTOR
ERF FRW	WIRE WOUND RESISTOR
ERQ ERU	FISE RESISTOR
ERC	SOLID RESISTOR
ERX ERG ERO ERN	METAL RESISTOR
ERJ	CHIP RESISTOR
ERS	THERMAL SENSTIVE RESISTOR

Rated Power

Code	1	2	3	3G	6	8	10	12	14	25
R.Power (w)	1	2	3	1/16	1/10	1/8	1/8	1/2	1/4	1/4

Code	S1	S2								
R.Power (w)	1/2	1/4								

Resistance Value

The 1st 2 figures are actual values and the 3rd denotes the number of zero.
"R" denotes the decimal point and all figures are the actual number with "R".

Example : ERDS2TJ471 → CARBON RESISTOR 1/4W 470Ω

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP01567A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		POWER (1)		
	VEP01568A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		POWER (2)		
	VEP04427A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		REAR JACK		
	VEP04429A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		AUDIO		
	VEP05184C	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		HEAD AMP		
	VEP06914A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		FRONT		INCLUDING THE
				FRONT JACK C.B.A.
				(VEP06916A)
	VEP06916A	P.C.BOADE W/COMPONENT	1	(RTL)<R>
		FRONT JACK		PARTS LIST IS
				INCLUDED IN FRONT
				C.B.A. (VEP06914A)
	VEP06915A	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		MAIN		
	VEP00S63C	P.C.BOARD W/COMPONENT	1	(RTL)<R>
		MECHANISM CONNECTION		

Ref.No.	Part No.	Pcs	
	[VEP01567A]		
	POWER (1)		
C1007	ECQU2A104MN	1	!
C1008	ECQU2A154MN	1	!
C1009	ECEC2EC121BB	1	
C1010	VCC0024	1	!
C1013	ECKD2H151KB	1	
C1014	ECQE6473KF	1	
C1015	ECA1VXLV470	1	
C1016	ECEA1CFE560	1	
C1017	ECKD2H101KB	1	
C1018,19	ECEA1DFZ681	2	
C1020	ECKD2H101KB	1	
C1021,22	ECEA1AFZ681X	2	
C1023	ECQV1H124JZ	1	
C1024	ECKF1H101KB	1	
C1025	ECQB1H103JF	1	
C1026	ECA1CXLV101	1	
C1027	ECKF1H102KB	1	
C1028	ECKF1H271KB	1	
D1001	S1WBA60S	1	!
D1002	VSD0002	1	
D1003	MA178	1	
D1004	MA4200-H	1	
D1005	MA185	1	
D1006	RL4Z	1	
D1007	31DQ04	1	
D1008	MA723VT	1	
IC1001	STRM6545LF	1	
IC1002	SI3120CA	1	
IC1003	TL431CLP	1	
L1006	ELF18D290A	1	!
L1009	EXCELSA35	1	
L1010	VLQEL05S101J	1	
L1011	VLQ0410	1	
L1012	VLQ0579	1	
L1013	VLP0083	1	
L1014	VLP0074	1	
P1001	VJP3091	1	
Q1001	PS2561L1-1	1	
R1001	ERDS2FJ103	1	
R1004	VSF0055	1	!
R1005	ERG3SJ393	1	
R1007	ERDS2FJ224	1	
R1008	ERDS2FJ221	1	
R1009	EROS2CKG62R0	1	
R1010	EROS2CKG3001	1	
R1011	EROS2CKG2701	1	
R1012	ERDS2TJ561	1	
R1013	ERDS2TJ272	1	
R1014	EROS2CKG2701	1	
R1015	EROS2CKG1602	1	
R1016	ERDS2TJ271	1	
R1017	ERDS2FJ224	1	
R1018	ERDS2FJ101	1	
R1019	ERDS2FJ152	1	
R1020	ERX1SJR82	1	
R1021,22	ERDS2FJ471	2	

Ref.No.	Part No.	Pcs	
T1001	VLT0657	1	!
	[VEP01568A]		
	POWEA (2)		
C1001	VCC0024	1	!
C1004	VCC0024	1	!
R1003	ERC12ZGK685C	1	
C6903	ECQB1H182JF	1	
C6904	ECQB1H103JF	1	
C6906	ECEA1AKA330	1	
D6901	11EQS04	1	
D6904	MA165VT	1	
IC6901	LM393P	1	
J6901,02	VJS3154	2	
J6903-06	VJJ0323	4	
P6901,02	VJP1410	2	
R6901	ERDS2TJ750	1	
R6919	ERDS2TJ103	1	
R6920	ERDS2TJ102	1	
R6921	ERDS2TJ564	1	
R6922	ERDS2TJ103	1	
R6923	ERDS2TJ562	1	
R6924	ERDS2TJ104	1	
R6925	ERDS2TJ103	1	
R6926	ERDS2TJ333	1	
R6927,28	ERDS2TJ103	2	
SW6906,07	VSS0216	2	
VR6901,02	EVND4AA00B15	2	
	[VEP04429A]		
	AUDIO		
C4502,03	ECEA1HKA010	2	
C4504	ECEA1CKA100	1	
C4505	ECEA1CKA101	1	
C4509	ECEA1CPZ470	1	
C4511	ECUM1H103ZFN	1	
C4512	ECEA1CPZ470	1	

Ref.No.	Part No.	Pcs	
C4513,14	ECEA1APZ101	2	
C4515,16	ECUM1H104ZFN	2	
C4517,18	ECEA1CPZ330	2	
C4520	ECUM1H104ZFN	1	
C4521,22	ECEA1HPZ3R3	2	
C4523	ECEA1APZ101	1	
C4524	ECEA1EBZ4R7	1	
C4525	ECQB1H223JF	1	
C4526	ECEA1APZ470	1	
C4527	ECQB1H103JF	1	
C4528	ECQB1H332JF	1	
C4529	ECUM1H561JCN	1	
C4530	ECEA1HPZ4R7	1	
C4531	ECUM1H561JCN	1	
C4532	ECUM1H681JCN	1	
C4533	ECUM1H104ZFN	1	
C4534	ECEA1APZ101	1	
C4535	ECUM1E473KBN	1	
C4536	ECUM1C224ZFN	1	
C4537	ECUM1H103ZFN	1	
C4538	ECUM1H471JCN	1	
C4539	ECEA1HUR47	1	
C4540	ECUM1H102JCN	1	
C4541	ECUM1E473KBN	1	
C4542	ECEA1APZ101	1	
C4543	ECUM1H104ZFN	1	
C4544	ECEA1HPZ4R7	1	
C4545	ECUM1H681JCN	1	
C4546,47	ECUM1H561JCN	2	
C4548	ECEA1EBZ4R7	1	
C4549	ECQB1H223JF	1	
C4550	ECEA1APZ470	1	
C4551	ECQB1H103JF	1	
C4552	ECQB1H332JF	1	
C4553,54	ECEA1CPZ100	2	
C4555	ECEA1APZ470	1	
C4556	ECEA1CPZ470	1	
C4557	ECQB1H822JF	1	
C4558	ECEA10M22	1	
C4559	ECEA1CBZ100	1	
C4560	ECUM1H471JCN	1	
C4561	ECUM1H102JCN	1	
C4562	ECUM1C105ZFN	1	
C4563	ECUM1H182JCN	1	
C4564	ECQB1H183JF	1	
C4565	ECUM1C105ZFN	1	
C4566	ECQB1H822JF	1	
C4567	ECQB1H153JF	1	
C4568	ECQB1H822JF	1	
C4569,70	ECEA1CKA100	2	
C4571	ECEA1HKN010	1	
C4572	ECEA1CKA220	1	
C4573	ECQB1H102JF	1	
C4574	ECQB1H103JF	1	
C4575	ECCD2H121K	1	
C4576	ECQP1332JZ	1	
D4501-04	MA151K	4	
FL4501	VLF0947	1	
IC4501	XLH7773KS	1	
IC4502	BA7755AF	1	
IC4503	AN1358S	1	
J4501-03	ERJ6GEYOR00	3	
J4505	ERJ6GEYOR00	1	
J4507	ERJ6GEYOR00	1	
L4501	VLQEL05S101J	1	

Ref.No.	Part No.	Pcs	
L4503,04	VLQEL05S101J	2	
L4505	VLQEL07F153J	1	
L4506	VLQEL05S102J	1	
P4501-03	VJS3186B018	3	
Q4501	2SB710A-R	1	
Q4503,04	2SD1328-R	2	
Q4505	2SB561	1	
Q4506	2SD655	1	
Q4507	2SD1328-R	1	
Q4508	2SB710	1	
Q4509	2SD639-R	1	
QR4501	MRN2404	1	
QR4502-04	MRN1404	3	
QR4506,07	MRN1404	2	
QR4508	MRN2404	1	
R4502	ERJ6GEYJ103	1	
R4503	ERJ6GEYJ563	1	
R4504	ERJ6GEYJ104	1	
R4505	ERJ6GEYJ563	1	
R4506	ERJ6GEYG363	1	
R4507	ERJ6GEYJ183	1	
R4512	ERJ6GEYG363	1	
R4513	ERJ6GEYJ183	1	
R4514	ERJ6GEYJ152	1	
R4515,16	ERJ6GEYJ103	2	
R4517	ERJ6GEYJ472	1	
R4518	ERJ6GEYJ104	1	
R4526	ERJ6GEYJ473	1	
R4527	ERJ6GEYJ104	1	
R4528	VRE0034E163	1	
R4529	ERJ6GEYJ472	1	
R4530	ERJ6GEYG224	1	
R4531	ERJ6GEYG303	1	
R4532	ERJ6GEYJ222	1	
R4533	ERJ6GEYG103	1	
R4534	VRE0034E36C	1	
R4535,36	ERJ6GEYJ152	2	
R4537	ERJ6GEYG562	1	
R4538	VRE0034E153	1	
R4539	ERJ6GEYJ334	1	
R4540	VRE0034E333	1	
R4541	ERJ6GEYG302	1	
R4542	ERJ6GEYG303	1	
R4543	VRE0034E10C	1	
R4544	ERJ6GEYJ224	1	
R4545	ERJ6GEYJ472	1	
R4546	ERJ6GEYJ473	1	
R4547	ERJ6GEY0R00	1	
R4548	ERJ6GEYJ333	1	
R4549	ERJ6GEYJ133	1	
R4550	ERJ6GEYJ562	1	
R4551	ERJ6GEYJ822	1	
R4552	ERJ6GEYJ394	1	
R4553	ERJ6GEYJ331	1	
R4554	ERJ6GEYJ621	1	
R4555	ERJ6GEYJ473	1	
R4556	ERJ6GEYJ123	1	
R4557	ERJ6GEYG183	1	
R4558	ERJ6GEYJ392	1	
R4559	ERJ6GEYG183	1	
R4560	ERJ6GEYG470	1	
R4561	ERJ6GEYJ271	1	
R4562	ERJ6GEYG820	1	
R4563	ERJ6GEYJ561	1	
R4564	ERJ6GEYJ562	1	
R4565,66	ERJ6GEYJ223	2	
R4567	ERJ6GEYJ103	1	

Ref.No.	Part No.	Pcs	
R4568	ERJ6GEYJ272	1	
R4569	ERJ6GEYJ562	1	
R4570	ERJ6GEYJ153	1	
R4574	ERJ6GEYJ102	1	
T4501	EIQ7QF014Q	1	
VR4501	EVMF6SA00B53	1	
VR4502	EVMF6SA00B24	1	
VR4503	EVMF6SA00BS3	1	
VR4504	EVMF6SA00B24	1	
VR4505	EVMF6SA00BY3	1	
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	HEAD AMP		
C503	ECUM1C105ZFN	1	
C505-08	ECUM1H103ZFN	4	
C509	ECUM1H332KBN	1	
C510,11	ECUM1H104ZFN	2	
C512	ECUM1H102JCN	1	
C513	ECUM1H104ZFN	1	
C514	ECUM1H103ZFN	1	
C515,16	ECUM1C474ZFN	2	
C517,18	ECUM1H103ZFN	2	
C519,20	ECUM1C474ZFN	2	
C521	ECUM1H103ZFN	1	
C523-25	ECUM1H103ZFN	3	
C526	VCEA0JAC221	1	
C527	ECUM1H102JCN	1	
C540	ECEA1CKA470	1	
C551	ECUM1H102JCN	1	
C552-54	ECUM1H103ZFN	3	
C555	ECEA0JPK221	1	
C556,57	ECUM1H103ZFN	2	
C559	ECUM1C105ZFN	1	
C560,61	ECUM1H471JCN	2	
C562,63	ECUM1H101JCN	2	
C564	ECUM1C105ZFN	1	
C565	ECUM1H101JCN	1	
C566	ECUM1H104ZFN	1	
C567	ECUM1H102JCN	1	
C569	ECUM1C105ZFN	1	
IC501	AN3336SB	1	
IC551	BA7743FS	1	
K501	ERJ6GEY0R00	1	
K503,04	ERJ6GEY0R00	2	
K506	ERJ6GEY0R00	1	
L501,02	VLQ0188K330	2	
L551,52	VLQ0188K330	2	
P501	VJS3193B020A	1	
P502	VJS1927	1	
QR501	MRN2404	1	
R501	ERJ6GEYJ101	1	
R502	ERJ6GEYJ152	1	
R503	ERJ6GEYG103	1	
R504	ERJ6GEYJ333	1	

Ref.No.	Part No.	Pcs
R505	ERJ6GEYJ222	1
R506	ERJ6GEYG752	1
R507	ERJ6GEYJ391	1
R508	ERJ6GEYJ331	1
R509-12	ERJ6GEYJ101	4
R513	ERJ6GEYJ103	1
R517	ERJ6GEYJ100	1
R526	ERJ6GEYG123	1
R551	ERJ6GEYJ473	1
R552	ERJ6GEYJ391	1
R553	ERJ6GEYJ273	1
R554	ERJ6GEYJ243	1
R556	ERJ6GEYJ333	1
R557	ERJ6GEYJ182	1
R558	ERJ6GEYJ332	1
R559,60	ERJ6GEYJ152	2
R561	ERJ6GEYJ332	1
R562	ERJ6GEYJ102	1
R563	VRE0034E100	1
R564	ERJ6GEYJ224	1
R565	ERJ6GEYJ473	1
R566	ERJ6GEYJ273	1
R567	ERJ6GEYJ153	1
R568	ERJ6GEYJ271	1
R569,70	ERJ6GEYJ102	2
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	FRONT	
C6502	ECEA1CKA330	1
C6503	ECEA1HKAR22	1
C6504-06	ECUM1H101JCN	3
C6507	ECUM1H220JCN	1
C6512,13	ECUM1H103ZFN	2
C6514	ECUM1H104ZFN	1
C6522	ECEA0JKA221	1
C6524	ECUM1H104ZFN	1
C6526-28	ERJ6GEY0R00	3
C6529	ECUM1H103ZFN	1
C6536	ECEA1CKA330	1
C6581	ECUM1H220JCN	1
D6501-08	MA151WA	8
D6510	MA151A	1
D6523,24	MA153	2
D6525	11EQS04	1
D6526,27	MA151A	2
DP6501	EDD063ZS5A4P	1
IC6501	UPD75328G679	1
IC6505	MN1382-R	1
IC6510	UPD6253GS	1
JK6850	VJJ0277	1
L6501	VLQEL05K121J	1
LD6501	LN043572P	1
LD6504	LN81RCPHL	1
LD6590	LN81RCPHL	1
P6501	VJS3193A012A	1

Ref.No.	Part No.	Pcs
P6502	VJS3193A020G	1
P6503	VJP3042A008W	1
P6850	VJS3042B008W	1
QR6503,04	MRN2402	2
R6501,02	ERJ6GEYJ102	2
R6509-12	ERJ6GEYJ681	4
R6515	ERJ6GEYJ221	1
R6518	ERJ6GEYJ473	1
R6519	VRE0034E153	1
R6520	VRE0034E392	1
R6521	VRE0034E683	1
R6525	ERJ6GEYJ473	1
R6527	ERJ6GEYJ331	1
R6528-30	ERJ6GEYJ104	3
R6534,35	ERJ6GEYJ473	2
R6537-39	ERJ6GEYJ473	3
R6540	ERJ6GEYJ103	1
R6558	ERJ6GEYJ332	1
R6559	ERJ6GEYJ473	1
R6560,61	ERJ6GEY0R00	2
R6562	ERJ6GEYJ473	1
R6566	ERJ6GEY0R00	1
R6567	ERJ6GEYJ473	1
R6572,73	ERJ6GEY0R00	2
R6576-78	ERJ6GEY0R00	3
R6579-82	ERJ6GEYJ473	4
R6586,87	ERJ6GEYJ473	2
R6588	ERJ6GEY0R00	1
R6589	ERJ6GEYJ392	1
R6590	ERJ6GEYJ471	1
R6591	ERJ6GEYJ221	1
R6592,93	ERJ6GEY0R00	2
SW6501-08	EVQQSB05G	8
SW6509	EVQPAD09K	1
SW6510-14	EVQQS307K	5
SW6516	VSS0250	1
SW6517,18	EVQQS307K	2
VR6501,02	EVUF2AH20B14	2
X6501	VSX0140	1
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	MAIN	
C2001,02	ECEA1CKA220	2
C2003	ECEA0JKA470	1
C2004	ECUM1H471JCN	1
C2005	ECEA0JKA221	1
C2006	ECEA1CKA100	1
C2007	ECEA1HKA3R3	1
C2008	ECEA1CKA220	1
C2009	ECUM1H223KBN	1
C2010,11	ECEA1EKN3R3	2
C2012	ECUM1H472KBN	1
C2013	ECEA1CKA330	1
C2014	ECUM1H392KBN	1
C2015	ECUM1H104ZFN	1
C2016	ECEA1HKA010	1
C2017	ECEA1HKA4R7	1
C2021	ECEA1CKN100	1
C2022	ECQB1H223JF	1

Ref.No.	Part No.	Pcs
C2023	ECUM1H103ZFN	1
C2024	ECEA1CKA220	1
C2025	ECQB1H682JF	1
C2026	ECUM1H221JCN	1
C2027	ECUM1H561JCN	1
C2301	ECEA0JKA470	1
C2302	ECEA1HKN4R7	1
C2303-06	ECQV1H104JZ	4
C2307	ECQB1H683JF	1
C2308,09	ECEA1HKN4R7	2
C2310	ECQB1H473JF	1
C2311	ECEA0JKA470	1
C2312	ECQV1H474JZ	1
C2313	ECEA1CKA470	1
C2314	ECEA0JKA221	1
C2315	ECEA1HKA010	1
C2316	ECUM1E224ZFN	1
C2317-19	ECEA1HKA2R2	3
C2320-23	ECUM1H333KBN	4
C2325	ECEA1CKA470	1
C2326	ECEA0JKA470	1
C2329,30	ECUM1H221JCN	2
C2332	ECUM1H102KBN	1
C2333	ECEA1HKA2R2	1
C2334	ECEA1HKN2R2	1
C2335	ECUM1H102KBN	1
C2336	ECEA1HKA2R2	1
C2337,38	ECUM1H102KBN	2
C2339	ECQV1H104JZ	1
C2340	ECEA1CKA470	1
C2341	ECUM1H103ZFN	1
C2342,43	ECUM1H333KBN	2
C2347	ECEA1HKN2R2	1
C2348	ECEA0JKA221	1
C3001	ECEA1CKA220	1
C3004,05	ECEA1HKA2R2	2
C3007	ECUM1H270JCN	1
C3008	ECEA1CKA470	1
C3009	ECUM1H680JCN	1
C3010	ECEA1CKA100	1
C3015	ECEA1CKA470	1
C3016	ECUM1E224ZFN	1
C3017	ECUM1H104ZFN	1
C3018	ECEA0JU102	1
C3020	ECUM1H103ZFN	1
C3021	ECUM1H101JCN	1
C3022	ECEA1HKA2R2	1
C3023	ECUM1H103ZFN	1
C3024,25	ECEA1CKA100	2
C3026	ECUM1H270JCN	1
C3027	ECUM1H103ZFN	1
C3028	ECEA0JKA470	1
C3029-33	ECUM1H103ZFN	5
C3034	ECUM1H100DCN	1
C3035	ECUM1H103ZFN	1
C3036	ECUM1H180JCN	1
C3037	ECUM1H223ZFN	1
C3038	ECUM1H103ZFN	1
C3039,40	ECUM1H271JCN	2
C3041	ECUM1H473ZFN	1
C3042	ECEA0JN101S	1
C3043	ECUM1H101JCN	1
C3044	ECUM1H471JCN	1
C3045	ECEA0JKA470	1
C3047	ECUM1H102JCN	1
C3049	ECEA1CPK470	1
C3051	ECEA0JKA331	1
C3052	ECEA1EKA4R7	1
C3053	ECEA1HKN4R7	1
C3055	ECEA1HKN4R7	1
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C3060	ECEA0JKN470	1
C3061	ECEA0JKA470	1
C3062	ECUM1H270JCN	1

Ref.No.	Part No.	Pcs
C3063	ECUM1H104ZFN	1
C3069	ECUM1H104ZFN	1
C3070	ECEA1CKA100	1
C3072	ECUM1H270JCN	1
C3073	ECUM1H560JCN	1
C3076	ECUM1H330JCN	1
C3080	ECUM1H103ZFN	1
C3084	ECUM1H103ZFN	1
C3085	ECEA1CKA101	1
C3086	ECEA0JKN220	1
C3087	ECUM1H270JCN	1
C3088	ECEA1HKA3R3	1
C3089	ECEA0JKA101	1
C3090	ECEA1CKA220	1
C3091	ECEA1CKA470	1
C3092	ECUM1H103ZFN	1
C3095	ECUM1H470JCN	1
C3096	ECUM1H180JCN	1
C3501	ECUM1H103ZFN	1
C3502	ECUM1H271JCN	1
C3503	ERJ6GEY0R00	1
C3505-07	ECUM1H103ZFN	3
C3508	ECEA1CKA470	1
C3509	ECUM1H103ZFN	1
C3510	ECEA0JKA101	1
C3511,12	ECUM1H103ZFN	2
C3513	ECEA1CKA470	1
C3514	ECUM1H103ZFN	1
C3515	ECUM1H101JCN	1
C3516	ECUM1H820JCN	1
C3518	ECUM1H331JCN	1
C3519	ECUM1H180JCN	1
C3520	ECUM1H220JCN	1
C3521	ECEA1CKA100	1
C3522,23	ECUM1H103ZFN	2
C3524	ECUM1H104ZFN	1
C3525	ECUM1H103ZFN	1
C3526	ECUM1H820JCN	1
C3527	ECUM1H120JCN	1
C3528	ECEA1HKA4R7	1
C3529	ECUM1H104ZFN	1
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C3531	ECEA1EKN4R7	1
C3532	ECEA1HKA4R7	1
C3533	ECUM1H150JCN	1
C3534	ECUM1H103ZFN	1
C3535,36	ECUM1H820JCN	2
C3537	ECUM1H150JCN	1
C3538	ECUM1H820JCN	1
C3541	ECUM1H151JCN	1
C3542	ECUM1H220JCN	1
C3543	ECEA1CKA220	1
C3544	ECUM1H103ZFN	1
C3547	ECUM1H102JCN	1
C3548	ECUM1H080DCN	1
C3549	ECUM1H104ZFN	1
C3550	ECEA1AKA221	1
C3551	ECUM1H151JCN	1
C3552	ECEA1HKA3R3	1
C3554	ECEA1HFS4R7	1
C3555	ECEA1HKA2R2	1
C3556	ECEA1CKA100	1
C3558	ECUM1H103ZFN	1
C3559	ECQV1H224JZ	1
C3560	ECUM1H821JCN	1
C3561	ECQB1H393JF	1
C3562	ECEA1CKA330	1
C3563	ECEA1AKA101	1
C3565,66	ECUM1H271JCN	2
C3567	ECUM1H104ZFN	1
C3568,69	ECQV1H184JZ	2
C3571	ECUM1H330JCN	1
C3572	ECUM1H471JCN	1
C3573,74	ECEA1CKA100	2
C3577	ECUM1H681JCN	1

Ref.No.	Part No.	Pcs
C3578	ECUM1H181JCN	1
C3579	ECUM1H103ZFN	1
C3580	ECUM1H150JCN	1
C3581	ECUM1H390JCN	1
C3583	ECUM1H103ZFN	1
C3586	ERJ6GEY0R00	1
C3588-90	ECUM1H103ZFN	3
C3591	ECUM1H102JCN	1
C3595	ECUM1H330JCN	1
C3596	ECQV1H104JZ	1
C3598	ECUM1E104KBN	1
C4001	ECUM1H221JCN	1
C4002	ECEA1CKA470	1
C4003	ECEA1HKA010	1
C4004,05	ECEA1CKA100	2
C4006,07	ECUM1E104KBN	2
C4008,09	ECEA1CKA100	2
C4010	ECEA1HKA010	1
C6001	ECUM1H104ZFN	1
C6004,05	ECUM1H104ZFN	2
C6006	ECEA1AKA330	1
C6007	ECUM1H104ZFN	1
C6008	ECUM1H220JCN	1
C6009	ECUM1H180JCN	1
C6010	ECEA1AKA220	1
C6011	ECUM1H104ZFN	1
C6012	ECQB1H332JF	1
C6013,14	ECUM1H271JCN	2
C6016-23	ECUM1H271JCN	8
C6025-28	ECUM1H271JCN	4
C6029,30	ECUM1H222KBN	2
C6033	ECEA0JKA101	1
C6103,04	ECEA0JKA221	2
C6105	ECEA1CKA470	1
D2001,02	MA151WK	2
D2301,02	11EQS04	2
D2304,05	MA153	2
D2306	MA4062M	1
D3001,02	MA151K	2
D3003	1SS283	1
D3004	MA151WK	1
D3005,06	1SS283	2
D3008	MA151WK	1
D3009,10	MA151K	2
D3501	MA4091	1
D3502	MA151K	1
D3504,05	MA151K	2
D6001-05	MA151K	5
D6008	11EQS04	1
D6010	MA151K	1
D6101	11EQS04	1
DL3001	VLD0151	1
DL3502	VLD0132	1
FL3001	ELB4M067	1
FL3004	ELB4M066	1
FL3005	ELB4K099	1
FL3501	VLF0721	1
FL3503	VLF0330	1
FL3504	ELB4K052	1
IC2001	AN3727S	1
IC2004	LM358PS	1
IC2006	LM393PS	1
IC2301	AN3815K	1
IC2302	BA6439S	1
IC2304	LM393PS	1
IC2305,06	UPC4556G2	2
IC3001	VEFH03F	1

Ref.No.	Part No.	Pcs
IC3002	VCR0298	1
IC3004	NJM2233BMA	1
IC3006	AN3495K	1
IC3501	MN74HC4053S	1
IC3502	MSM6964-3RS	1
IC3503	VEFH04E	1
IC4001	NJM4558M	1
IC4002	BA6138	1
IC6001	MN6734VMEA	1
IC6002	LM358PS	1
IC6003	BA6219B	1
IC6004	MN1280R	1
IC6006	TC7W00F	1
J3011	ERJ6GEY0R00	1
J3014-16	ERJ6GEY0R00	3
J3018,19	ERJ6GEY0R00	2
J3021-23	ERJ6GEY0R00	3
J3026	ERJ6GEY0R00	1
J3502	ERJ6GEY0R00	1
J3504,05	ERJ6GEY0R00	2
J3508	ERJ6GEY0R00	1
J4001,02	ERJ6GEY0R00	2
J6001	ERJ6GEY0R00	1
J6002	ERDS2TJ103	1
J6003-06	ERJ6GEY0R00	4
J6008	ERJ6GEY0R00	1
J6101	ERJ6GEY0R00	1
L2001-04	VLQ0460	4
L2301	VLQ0460	1
L2304	VLQ0460	1
L2305	VLQEL05K102J	1
L3003	VLQ0460	1
L3005	VLQ0460	1
L3007	VLQEL05K680J	1
L3008	VLQ0460	1
L3009,10	VLQEL05K150J	2
L3011	VLQEL05K6R8J	1
L3013	VLQ0460	1
L3016	VLQ0460	1
L3017	VLQEL05K470J	1
L3018	VLQEL05K121J	1
L3503	VLQEL05K820J	1
L3504-06	VLQ0460	3
L3507,08	VLQEL05K101J	2
L3509	VLQEL05K470J	1
L3510	VLQEL05K101J	1
L3511	VLQ0460	1
L3513	VLQEL05K100J	1
L3514	VLQEL05K681J	1
L3515,16	VLQ0460	2
L3517	VLQEL05K180J	1
L3518	VLQEL05K181J	1
L3519	VLQEL05K220J	1
L3520,21	VLQEL05K150J	2
L3523	VLQEL05K221J	1
L3524	VLQEL05K331J	1
L3526	VLQEL05K470J	1
L3527	VLQEL05K221J	1
L3528	VLQEL05K330J	1
L3529	VLQEL05K271J	1
L3530,31	VLQEL05K390J	2
L3533	VLQEL05K821J	1
L4001	VLQEL05K101J	1
L6002	VLP0083	1
L6003	VLQ0460	1
L6004-07	VLQEL05K221J	4
P2301	VJP3078	1
P2302	VJS3537A015G	1
P2303	VJP3529	1

Ref.No.	Part No.	Pcs
P3501	VJS3193A020A	1
P4001-03	VJP3186A018W	3
P4004	VJS2329	1
P6001	VJS3193A013A	1
P6002	VJP1229T	1
P6003	VJP3079	1
P6004	VJS3193A012A	1
P6005	VJS3193A020A	1
P6007,08	VJS1410	2
Q3001	MSB709-R	1
Q3002	MSD601-R	1
Q3003	MSC2295-B	1
Q3004	MSD601-R	1
Q3005,06	MSC2295-B	2
Q3007	MSD601-R	1
Q3008,09	MSC2295-B	2
Q3011	MSD601-R	1
Q3013	2SA1022-B	1
Q3014	MSC2295-B	1
Q3016,17	MSC2295-B	2
Q3018	MSD601-R	1
Q3501,02	MSD601-R	2
Q3503,04	MSC2295-B	2
Q3505,06	MSB709-R	2
Q3507	MSD601-R	1
Q3508	2SB642	1
Q3509	2SB643	1
Q3510	MSC2295-B	1
Q3511	MSD601-R	1
Q3512	MSC2295-B	1
Q3514	MSD601-R	1
Q3516	MSC2295-B	1
Q3517,18	MSB709-R	2
Q3519	MSC2295-B	1
Q6001	MSB709-R	1
Q6004	2SD601A	1
Q6101	2SB644-S	1
QR2001	XN1213	1
QR2002	MRN1404	1
QR3001	MRN1404	1
QR3003,04	MRN1404	2
QR3014	MRN1404	1
QR3501	MRN1404	1
QR3505	MRN1402	1
QR3506	MRN2402	1
QR3507	DTC363EK	1
QR3509,10	XN1213	2
QR3511	MRN1402	1
QR3512	MRN2404	1
QR3513	MRN1402	1
QR6001	XN1211	1
QR6005-07	XN1213	3
QR6008,09	MRN1404	2
QR6101	MRN1402	1
R2001	ERJ6GEYJ562	1
R2002	ERJ6GEYJ682	1
R2003,04	ERJ6GEYJ563	2
R2005,06	ERJ6GEYJ223	2
R2007	ERJ6GEYJ272	1
R2008	ERJ6GEYJ221	1
R2009	ERJ6GEYG622	1
R2011,12	ERJ6GEYJ224	2
R2013,14	ERJ6GEYJ223	2
R2015	ERJ6GEYJ104	1
R2017	ERJ6GEYJ471	1
R2018-20	ERJ6GEYG223	3
R2021	ERJ6GEYG333	1
R2022	ERJ6GEYG224	1
R2023	ERJ6GEYJ103	1

Ref.No.	Part No.	Pcs
R2024,25	ERJ6GEYJ223	2
R2027	ERJ6GEYJ473	1
R2029	ERJ6GEYJ103	1
R2030	ERJ6GEYJ683	1
R2301	ERDS2TJ150	1
R2302	ERX12SJR68	1
R2303,04	ERDS2TJ150	2
R2305	ERJ6GEYJ102	1
R2306	ERJ6GEYJ332	1
R2307,08	ERJ6GEYJ273	2
R2309	ERJ6GEYJ122	1
R2310	ERJ6GEYG432	1
R2311	ERJ6GEYJ684	1
R2312	ERJ6GEYG473	1
R2313	ERDS2TJ330	1
R2314	ERJ6GEYJ102	1
R2315	ERDS2TJ330	1
R2316	ERX12SJR47	1
R2317	ERDS2TJ330	1
R2318	ERJ6GEYJ681	1
R2321	ERJ6GEYJ103	1
R2322	ERJ6GEYJ224	1
R2323	ERJ6GEYJ103	1
R2324	ERJ6GEYJ224	1
R2325-28	ERJ6GEYJ103	4
R2329,30	ERJ6GEYJ473	2
R2331	ERJ6GEYJ472	1
R2332	ERJ6GEYJ333	1
R2333	ERJ6GEYJ332	1
R2334	ERJ6GEYJ472	1
R2335	ERJ6GEYJ333	1
R2336	ERJ6GEYJ332	1
R2337	ERJ6GEYJ102	1
R2338	ERJ6GEYJ105	1
R2339	ERJ6GEYJ821	1
R2340	ERJ6GEYJ222	1
R2341	ERDS1TJ561	1
R2342,43	ERJ6GEYJ102	2
R3001,02	ERJ6GEYJ681	2
R3003	ERJ6GEYJ104	1
R3006	ERJ6GEYJ223	1
R3008	ERJ6GEYJ102	1
R3009	ERJ6GEYJ222	1
R3011	ERJ6GEYJ223	1
R3015	ERJ6GEYJ222	1
R3016	ERJ6GEYJ103	1
R3017,18	ERJ6GEYJ331	2
R3019	ERJ6GEYJ750	1
R3020	ERJ6GEY0R00	1
R3021	ERJ6GEYJ122	1
R3022	ERJ6GEYJ104	1
R3023,24	ERJ6GEYJ273	2
R3025	ERJ6GEYJ681	1
R3026	ERJ6GEYJ102	1
R3027	ERJ6GEYJ223	1
R3028	ERJ6GEYJ222	1
R3029-31	ERJ6GEYJ561	3
R3032	ERJ6GEYJ123	1
R3033	ERJ6GEYJ822	1
R3034	ERJ6GEYJ102	1
R3035	ERJ6GEYJ471	1
R3037,38	ERJ6GEYJ471	2
R3039	ERJ6GEYJ122	1
R3040	ERJ6GEYJ471	1
R3042	ERJ6GEYJ331	1
R3043,44	ERJ6GEYJ102	2
R3045	ERJ6GEYJ392	1
R3046	ERJ6GEYJ222	1
R3047	ERJ6GEYJ471	1
R3048	ERJ6GEYJ822	1
R3049	ERJ6GEYG112	1
R3050,51	ERJ6GEYG561	2
R3052	ERJ6GEY0R00	1
R3059	ERJ6GEYJ273	1
R3060	ERJ6GEYJ333	1

Ref.No.	Part No.	Pcs
R3061	ERJ6GEYJ102	1
R3063	ERJ6GEYJ103	1
R3064	ERJ6GEYJ332	1
R3065	ERJ6GEYJ101	1
R3069	ERJ6GEYJ102	1
R3071	ERJ6GEYJ102	1
R3072	ERJ6GEYJ273	1
R3073	ERJ6GEYJ561	1
R3074	ERJ6GEYJ473	1
R3075	ERJ6GEYJ821	1
R3076	ERJ6GEYJ681	1
R3078	ERJ6GEYJ822	1
R3080	ERJ6GEYJ182	1
R3081	ERJ6GEYJ103	1
R3082	ERJ6GEYJ105	1
R3084	ERJ6GEYJ333	1
R3086	ERJ6GEYJ222	1
R3094	ERJ6GEYJ103	1
R3095	ERJ6GEYJ123	1
R3096	ERJ6GEYJ103	1
R3097	ERJ6GEYJ473	1
R3098	ERJ6GEYJ103	1
R3099	ERJ6GEYJ332	1
R3100	ERJ6GEYJ681	1
R3101	ERJ6GEYJ332	1
R3102	ERJ6GEYG273	1
R3103	ERJ6GEYG822	1
R3104	ERJ6GEYJ821	1
R3105	ERJ6GEYJ152	1
R3106	ERJ6GEYJ103	1
R3107	ERJ6GEYG472	1
R3108	ERJ6GEYG152	1
R3109	ERJ6GEYJ332	1
R3110	ERJ6GEYJ330	1
R3113	ERJ6GEYJ223	1
R3114	ERJ6GEYJ122	1
R3117	ERJ6GEYJ221	1
R3118	ERJ6GEY0R00	1
R3501,02	ERJ6GEYJ102	2
R3503	ERJ6GEYJ104	1
R3504	ERJ6GEYJ331	1
R3509	ERJ6GEYJ473	1
R3510	ERJ6GEYJ102	1
R3511	ERJ6GEYJ330	1
R3512	ERJ6GEYJ473	1
R3513	ERJ6GEYJ222	1
R3514	ERJ6GEYJ333	1
R3515-18	ERJ6GEYJ473	4
R3519	ERJ6GEYJ333	1
R3520	ERJ6GEYJ222	1
R3521	ERJ6GEYJ103	1
R3522	ERJ6GEYJ222	1
R3523	ERJ6GEYJ102	1
R3524	ERJ6GEYJ272	1
R3525	ERJ6GEYJ103	1
R3526	ERJ6GEYJ223	1
R3527	ERJ6GEYJ104	1
R3528	ERJ6GEYJ271	1
R3529	ERJ6GEYJ561	1
R3530,31	ERJ6GEYJ102	2
R3532	ERJ6GEYG681	1
R3533	ERJ6GEYJ222	1
R3534	ERJ6GEYJ330	1
R3535,36	ERJ6GEYJ473	2
R3537	ERJ6GEYJ820	1
R3538	ERJ6GEYJ680	1
R3539	ERJ6GEYJ222	1
R3540	ERJ6GEYJ561	1
R3541	ERJ6GEYJ102	1
R3542	ERJ6GEYJ332	1
R3543	ERJ6GEYJ272	1
R3544	ERJ6GEYJ103	1
R3545	ERJ6GEYJ183	1
R3547	ERJ6GEYJ273	1
R3548	ERJ6GEYJ103	1

Ref.No.	Part No.	Pcs
R3549	ERJ6GEYJ222	1
R3550	ERJ6GEYJ330	1
R3551	ERJ6GEYJ182	1
R3552	ERJ6GEYJ391	1
R3553	ERJ6GEYJ102	1
R3554	ERJ6GEYJ223	1
R3555	ERJ6GEYJ183	1
R3556	ERJ6GEYJ472	1
R3557	ERJ6GEYJ682	1
R3558	ERJ6GEYJ223	1
R3560	ERJ6GEY0R00	1
R3561	ERJ6GEYJ221	1
R3562	ERJ6GEYJ103	1
R3564	ERJ6GEYJ222	1
R3565	ERJ6GEYJ272	1
R3566	ERJ6GEYJ102	1
R3567,68	ERJ6GEY0R00	2
R3572	ERJ6GEYJ102	1
R3573,74	ERJ6GEYJ391	2
R3575	ERJ6GEYJ102	1
R3576	ERJ6GEYJ222	1
R3579	ERJ6GEYJ682	1
R3580	ERJ6GEYJ123	1
R3581	ERJ6GEYJ473	1
R3582	ERJ6GEYJ471	1
R3583,84	ERJ6GEYJ103	2
R3585	ERJ6GEYJ473	1
R3586	ERJ6GEYJ471	1
R3587	ERJ6GEYJ681	1
R3589	ERJ6GEYJ102	1
R3590	ERJ6GEYJ152	1
R3591	ERJ6GEYJ473	1
R3592	ERJ6GEYJ821	1
R3593	ERJ6GEYJ152	1
R3596	ERJ6GEYJ472	1
R3597	ERJ6GEYG332	1
R3598	ERJ6GEYG392	1
R3599	ERJ6GEY0R00	1
R3600,01	ERJ6GEYJ102	2
R3607	ERJ6GEYJ102	1
R3608	ERJ6GEYJ471	1
R3612	ERJ6GEYJ222	1
R3613	ERJ6GEYJ332	1
R4001,02	ERJ6GEYJ561	2
R4003	ERJ6GEYJ100	1
R4004	ERJ6GEYJ273	1
R4007,08	ERJ6GEYJ122	2
R4009,10	ERJ6GEYJ562	2
R4011,12	ERJ6GEYJ104	2
R4013,14	ERJ6GEYJ103	2
R6001	ERQS2CKG2000	1
R6002	ERJ6GEYJ271	1
R6003,04	ERJ6GEYJ272	2
R6005	ERJ6GEYG244	1
R6006	ERJ6GEYJ153	1
R6007	ERJ6GEYJ333	1
R6008	ERX1SJ1R8	1
R6009	ERJ6GEYG112	1
R6010	ERJ6GEYJ102	1
R6011	ERJ6GEYJ103	1
R6012	ERJ6GEYJ332	1
R6013	ERJ6GEYJ103	1
R6014	ERJ6GEYJ564	1
R6015	ERJ6GEYG512	1
R6016	ERJ6GEYJ103	1
R6017	ERJ6GEYJ471	1
R6018	ERJ6GEYJ222	1
R6019	ERJ6GEYJ683	1
R6020,21	ERJ6GEYJ223	2
R6022	ERJ6GEYJ103	1
R6023	ERJ6GEYJ683	1
R6024-26	ERJ6GEYJ333	3
R6027	ERJ6GEYJ223	1
R6028-34	ERJ6GEYJ102	7
R6035	ERJ6GEYJ223	1

Ref.No.	Part No.	Pcs
R6036-38	ERJ6GEYJ102	3
R6039	ERJ6GEYJ272	1
R6040	ERJ6GEYJ221	1
R6041	ERJ6GEYJ272	1
R6042	ERJ6GEYJ221	1
R6045	ERJ6GEYJ333	1
R6052-55	ERJ6GEYJ103	4
R6056,57	ERJ6GEYJ471	2
R6058	ERJ6GEYJ822	1
R6059	ERJ6GEYJ471	1
R6060	ERJ6GEYJ473	1
R6061	ERJ6GEYJ222	1
R6066	ERJ6GEYJ103	1
R6067	ERJ6GEYJ562	1
R6068	ERJ6GEYJ472	1
R6069	ERJ6GEYJ333	1
R6070	ERJ6GEYJ103	1
R6101	ERDS2TJ103	1
R6104	ERDS2TJ121	1
R6105	ERJ6GEYJ102	1
R6114	ERDS2TJ472	1
VR2001	EVMF6SA00B23	1
VR2002	EVMF6SA00B15	1
VR2004	EVMF6SA00B15	1
VR2006-08	EVMF6SA00B15	3
VR3001	EVMF6SA00B24	1
VR3002	EVMF6SA00B13	1
VR3003	EVMF6SA00B22	1
VR3004	EVMF6SA00B52	1
VR3005	EVMF6SA00B13	1
VR3006,07	EVMF6SA00B52	2
VR3008	EVMF6SA00B24	1
VR3501	EVMF6SA00B23	1
VR3504,05	EVMF6SA00B53	2
VR4001	EVMF6SA00B54	1
VR4002,03	EVMF6SA00B13	2
VR4004,05	EVMF6SA00B53	2
VR4006	EVMF6SA00B54	1
W1-W9	ERJ6GEY0R00	9
W10-21	ERJ6GEY0R00	12
X3501	VSX0296	1
X3502	VSX0160	1
X6001	VSX0296	1
	[VEP00S63C]	
	MECHANISM	
	CONNECTION	
IC1501,02	ON1387	2
P1503	VJS3316A002	1
P1504	VJS3317A004	1
P1505	VJS3493	1
SW1501	VES0695	1

Ref.No.	Part No.	Pcs

Ref.No.	Part No.	Pcs

Ref.No.	Part No.	Pcs

Ref.No.	Part No.	Pcs

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	[VEP01567A]	POWER (1)		
	VMC0811	IC HOLDER SPRING	1	
	VMZ1608	CAPACITOR TUBE	1	<!>
	VSC3778	HEAT SINK	1	
	VMZ1305	CAPACITOR COVER	2	<!>
	[VEP01568A]	POWER (2)		
	VMZ1608	CAPACITOR TUBE	2	<!>
	SJT777	ANGLE	2	<!>
	VJF0318	FUSE HOLDER	2	<!>
	[VEP04427A]	REAR JACK		
	VJH0718	JACK PLATE	1	
	XTV3+8FFZ	SCREW	2	
	XTV3+10GFZ	SCREW	4	
	[VEP04429A]	AUDIO		
	VSC3304	H.A. SHIELD CASE	1	
	VSC3768	H.A. SHIELD CASE (TOP)	1	
	VSC3770	H.A. SHIELD CASE (BOTTOM)	1	
	[VEP06914A]	FRONT		
	VJF0948	LCD HOLDER	1	
	VMX0473	LED SPACER	2	
	[VEP06915A]	MAIN		
	VKC0295	P.C SPACER	2	
	VKC0421	P.C HINGE	3	
	VKC0422	SPACER	2	
	VMC0075	SPRING	1	
	VSC3405	HEAT SINK	1	
	[VEP00S63C]	MECHANISM CONNECTION		
	VMD2029	REEL SHAFT GUIDE	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

! Warning

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Order No. VSD9504S238
D2

Service Manual

Supplement

NTSC / PAL **Video Product**

Subject :Addition of Barrier Angle

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-1070DCP	4	VSD9409M253	D5-----
AG-6124P	3	VSD9409M253	D5-----
AG-5210P V070D0	7	VSD9401M241	D5-----
AG-6124E/B	6	VSD9406M635	D5-----
AG-1070DCE	4	VSD9411M638	D5-----
AG-5260E/B	6	VSD9404M633	D5-----

Symptom : Tape eject and tape insertion may not be performed smoothly.

Cause : The ribbon cables from connectors P6001, P2302 and P6005 on the main C.B.A. may interfere with the cassette front cover.

Remedy : In order to prevent this symptom, the following barrier angle has been added on the right / rear come of the front loading unit.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
251	---------	VMP4662	BARRIER ANGLE	1	E	
B14		XTB26+8G	SCREW	2	E	

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Order No. VSD9602S202
D1

Service Manual

Supplement

NTSC / PAL **Video Product**

Subject :Change of IC and VR

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-5210P V01030	9	VSD9401M241	B5-----
AG-5260E/B	8	VSD9404M633	B5-----

Board: AUDIO

Reason for Change

- ❑ The following part(s) has(have) been changed for serviceability improvement.
- ❑ The following part(s) has(have) been changed for productivity improvement.
- ■ The following part(s) has(have) been changed for standardization.
- ❑ The following part(s) has (have) been changed for the safety regulation.
- ❑

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
IC451	XLH7773KS	XLH7773AKS	IC	1	A	
VR4505	EVMF6SA00BY3	EVMF6SA00B53	V. RESISTOR	1	A	Only AG-5260E/B

TE2-4432

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Order No. VSD9806S212
D4

Service Manual

Supplement

NTSC/PAL **Video Product**

Subject : Change of IC

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-5210P V 01030	13	VSD9401M241	'98 Running Change
AG-5260B	12	VSD9404M636	'98 Running Change
AG-5260E	12	VSD9404M636	'98 Running Change

Board: AUDIO C.B.A.

Reason for Change

- ☐ The following part(s) has(have) been changed for serviceability improvement.
- ☐ The following part(s) has(have) been changed for productivity improvement.
- ■ The following part(s) has(have) been changed for standardization.
- ☐ The following part(s) has (have) been changed for the safety regulation.
- ☐

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
IC4501	XLH7773AKS	BH7773AKS	IC	1	A	

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Order No. VSD9610S201
D1,D2

Service Manual

Supplement

NTSC / PAL **Video Product**

Subject :Change of Shield Sheet

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-5210P	11	VSD9401M241	I6-----
AG-RT600P	4	VSD9509M262	I6-----
AG-5260E/B	10	VSD9404M633	I6-----

Reason for Change

- ❑ The following part(s) has(have) been changed for serviceability improvement.
- ❑ The following part(s) has(have) been changed for productivity improvement.
- ■ The following part(s) has(have) been changed for standardization.
- ❑ The following part(s) has (have) been changed for the safety regulation.
- ❑

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
	VSC4044	VSC4561	SHIELD SHEET	1	A	

TM2-3416

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Order No. VSD9806S217
D1,D2

Service Manual

Supplement

NTSC/PAL **Video Product**

Subject : Change of Coil

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-RT600P	6	VSD9509M262	H8-----
AG-1070DCP	12	VSD9409M253	H8-----
AG-5210P V 010130	14	VSD9401M241	H8-----
AG-6124P	14	VSD9409M253	H8-----
AG-1070DCE	11	VSD9411M638	H8-----
AG-5260B	13	VSD9404M633	H8-----
AG-5260E	13	VSD9404M633	H8-----
AG-6124B	13	VSD9406M635	H8-----
AG-6124E	13	VSD9406M635	H8-----

Board: FRONT C.B.A.
FRONT JACK C.B.A.

The Front C.B.A. has been changed to take compatibility with the development model.
Please refer to figures on back page.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
R6531	-----	ERJ6GEY0R00	RESISTOR 1/10W 0	1		FRONT
R6594	-----	ERJ6GEY0R00	RESISTOR 1/10W 0	1		FRONT
R6595	-----	VLP0147	COIL	1		FRONT
C6851	-----	ECQB1H123JF	CAPACITOR 50V 0.012	1		Except AG-RT600P, AG-5210P
R6851	-----	ERJ6GEY0R00	RESISTOR 1/10W 0	1		
R6852	-----	ERJ6GEY0R00	RESISTOR 1/10W 0	1		

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ORDER NO. VSD9402M632

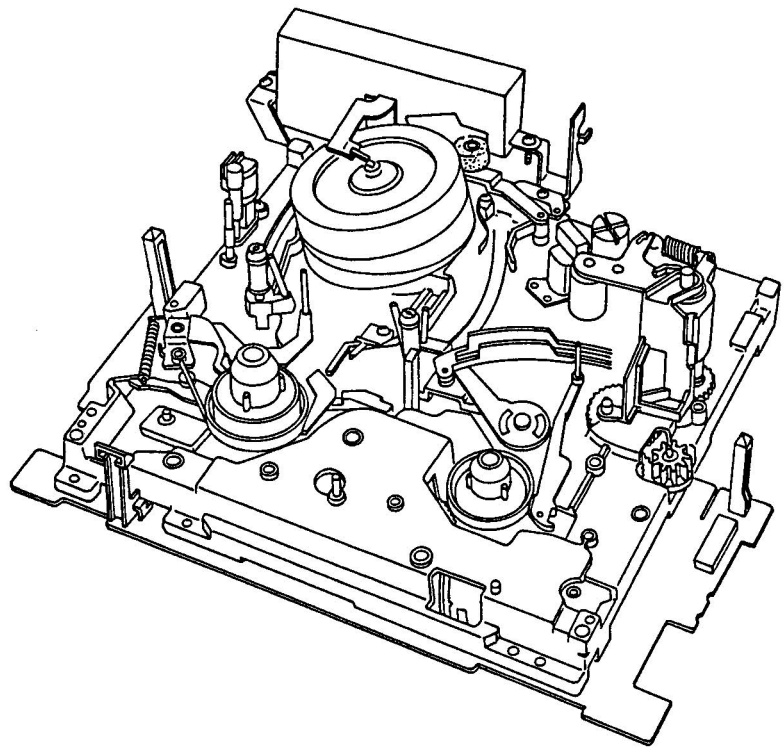
Service Manual

Video Cassette Recorder

VHS
PAL

Sec. 1 *General Information*
Sec. 2 *Maintenance Procedures*
Sec. 3 *Mechanical Adjustment Procedur*
Sec. 4 *Assembly & Phase Adjustment Procedure*

K-MECHANISM



IMPORTANT

The **K-MECHANISM** chassis are built in several Panasonic SVHS／VHS Video Cassette Recorder.

Thus, Properly file this service manual with the service manual of the relative video cassette recorder.

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INTRODUCTION

This Service Manual contains the technical information which service personnel to understand and service the K-Mechanism.
The Maintenance Chart, Mechanical Parts List and Mechanical Specification, please refer to the service manual of each model.

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SECTION 1 GENERAL INFORMATION 1-1
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SECTION 1
GENERAL INFORMATION

The K mechanism maintains the same high performance as G2 mechanism but with a smaller quantity of mounted parts, 40% less than G2 mechanism.

1-1. FEATURE of K MECHANISM

1-1-1. Parts Reduction

<K Mechanism>

a. Reduction in the number of drive parts through the use of a single motor to perform front loading and unit loading.
b. Direct drive of brakes and loading gears with the multi-function main lever.
c. Elimination of sub lever and solenoids.

<Front Loading Unit>

a. Elimination of a slide switch, to reduce wiring.
b. Elimination or combining the joint parts.
c. Smaller and thinner the top plate and rack parts.

1-1-2. No Adjustment of the following is required.

a. Take-up inclined position.
b. P5 Post height.

1-1-3. Reduced Gear Phase Position Alignments

The K Mechanism has only 6 gear phase alignment positions and G2 mechanism has 12 gear phase alignment positions.

1-2. OPERATION of K-MECHANISM

The K mechanism has two motors, the loading motor and capstan motor. The loading motor operates the front loading/unloading and tape loading/unloading. The capstan motor operates each mode.
The bottom C.B.A. connects the mechanism to the system control circuit. On the bottom C.B.A. there are take-up and supply photo-sensors, Sensor LED, Mode Switch Connector, Safety Tab Switch, Supply and Take-up Reel Sensors and Loading Motor Connector. All sensor information sent to the system control circuit.

1-3. EMERGENCY CASSETTE REMOVAL

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to removing cassette manually.
There are 2 methods of removing the cassette.

A. Battery Operation

1. Remove the bottom plate.
2. Connect the battery (Manganese-Type (AA)(R6) 3pcs./+4.5V) to P1503 as shown in Fig.G1.
3. After moving the loading post to the unloaded position, disconnect the battery to stop the loading motor.
4. Turn the capstan rotor clockwise to take up the tape.
5. Reconnect the battery to eject the cassette.

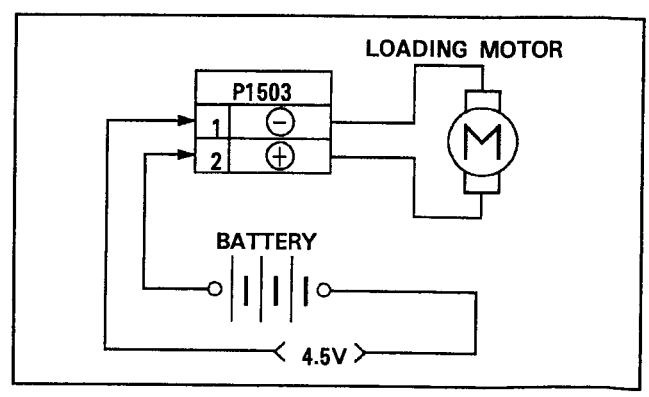


Fig.G1

B. Hand Operation

1. Remove the bottom plate.
2. Turn the worm gear to arrow mark direction (A) by finger as shown in Fig.G2 until loading post move to unloading position.
3. Turn the capstan rotor clockwise (B) to take up the tape.
4. Turn the worm gear again to eject the cassette.

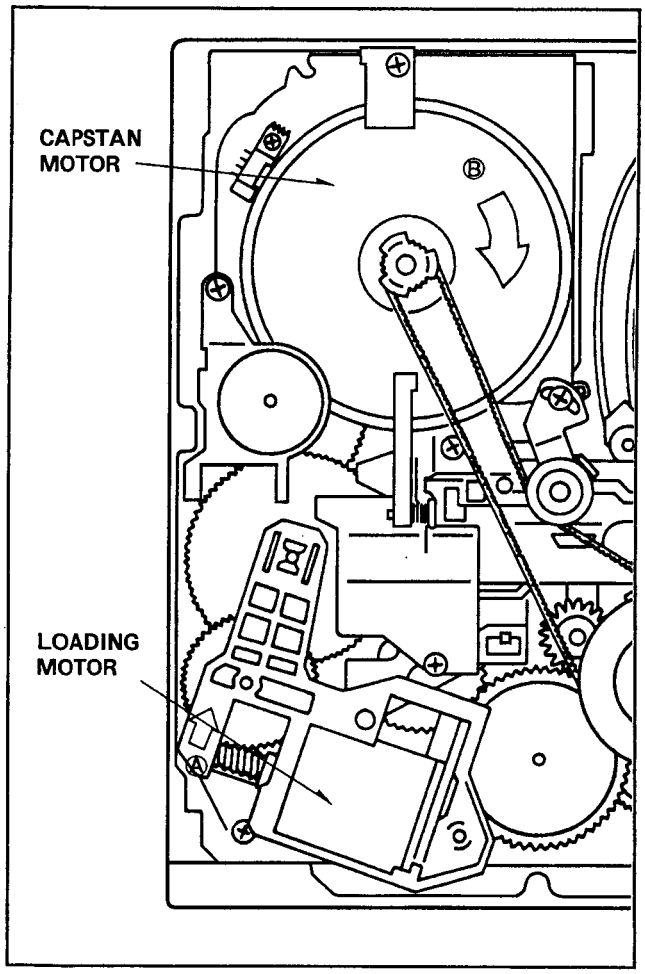


Fig.G2

1-4. EJECT OPERATION

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

If the Eject operation is performed without the cassette installed while repairing or making the mechanical phase alignment, the main cam gear will not rotate. For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate the carriage connection gear by hand in the direction of the arrow.

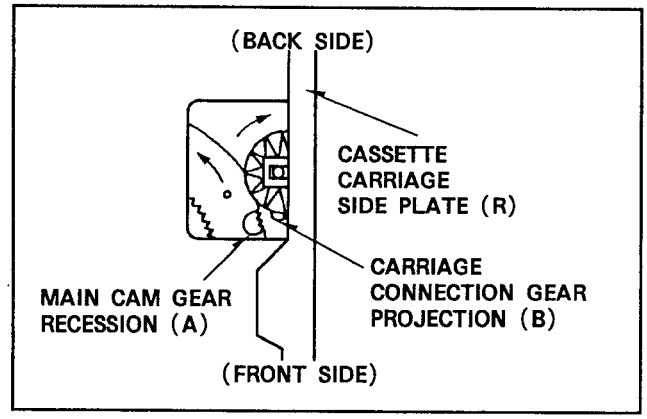


Fig.G3

1-5. REMOVAL of MECHANISM

1-5-1. Removal of Top Plate

1. Unscrew 2 screws (A) and unlock 4 locking tabs to arrow direction as shown in Fig.G4.
2. Lift up the Top Plate.

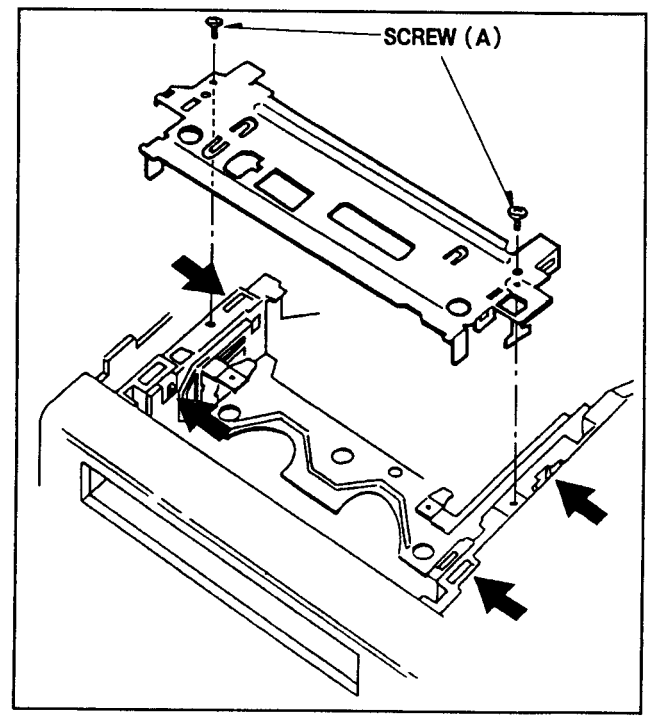


Fig.G4

1-5-2. Removal of Mechanism Chassis

1. Unscrew 2 screws (A) push the Holder Plate slightly to rear of the mechanism.
2. Unscrew a screw (B).
3. Disconnect all cable and connectors on the mechanism chassis.
   1)FE Head connector
   2)A/C Head connector
   3)Power Transistor connector
   4)Head Amp connector
   5)Capstan cable
4. Disconnect a Dew Sensor connector on the MAIN C.B.A.
5. Lift the mechanism chassis slightly and disconnect a connector of Cylinder Motor and a cable of Mechanism Connection C.B.A.
   Then mechanism chassis out of the unit.

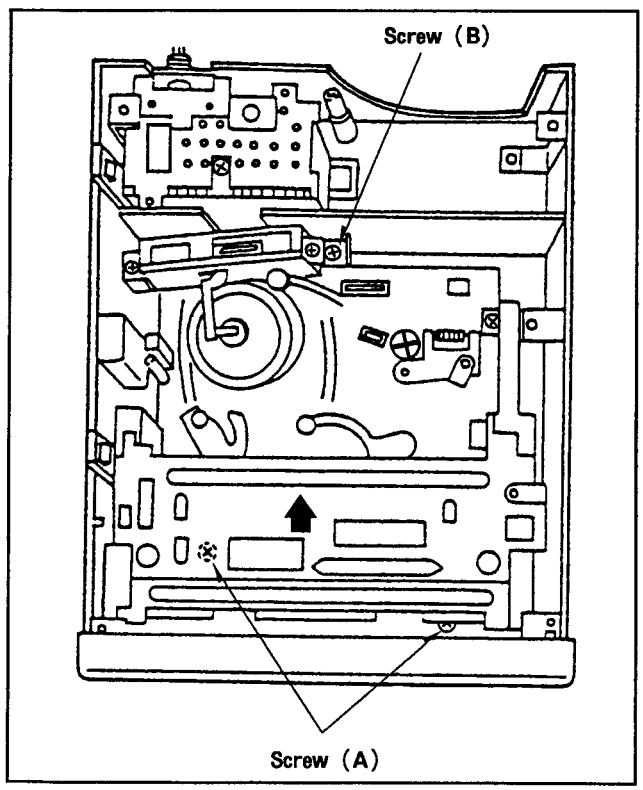


Fig.G5

1-5-3. Removal of Mechanism Connection C.B.A.

1. Unscrew 4 screws (C).
2. Lift up the Mechanism Connection C.B.A.

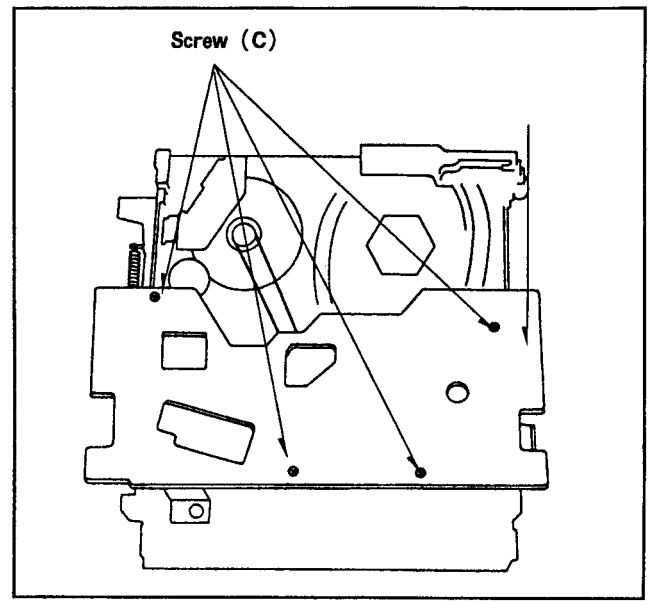
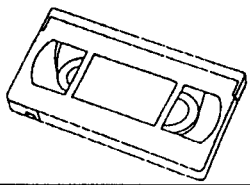
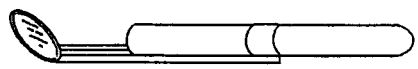
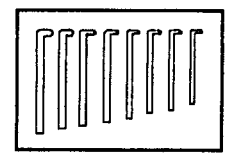
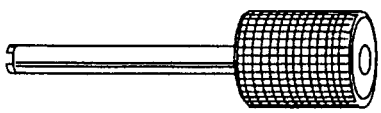
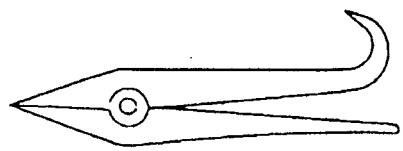
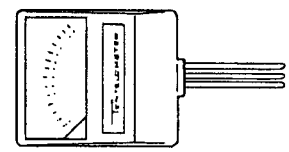
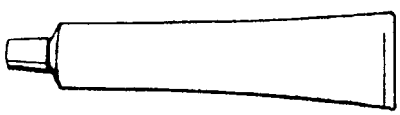
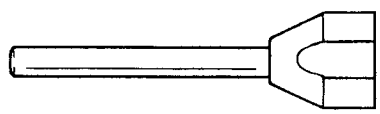
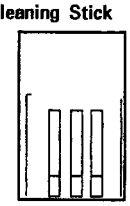
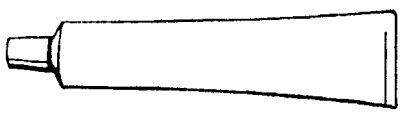
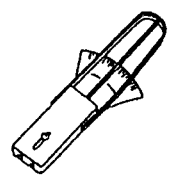
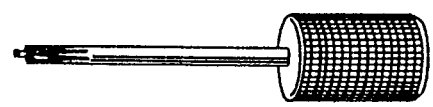


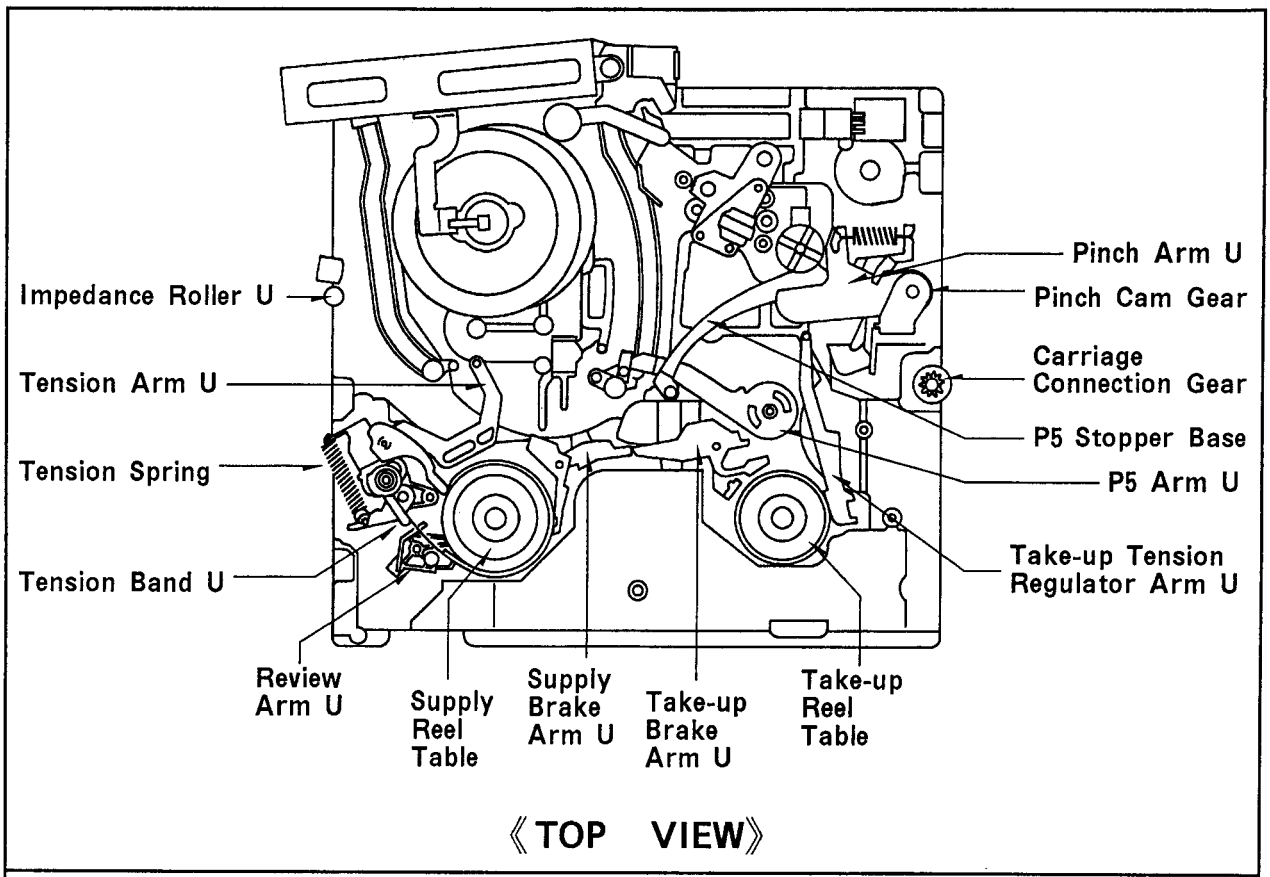
Fig.G6

1-6. SERVICE FIXTURES AND TOOLS

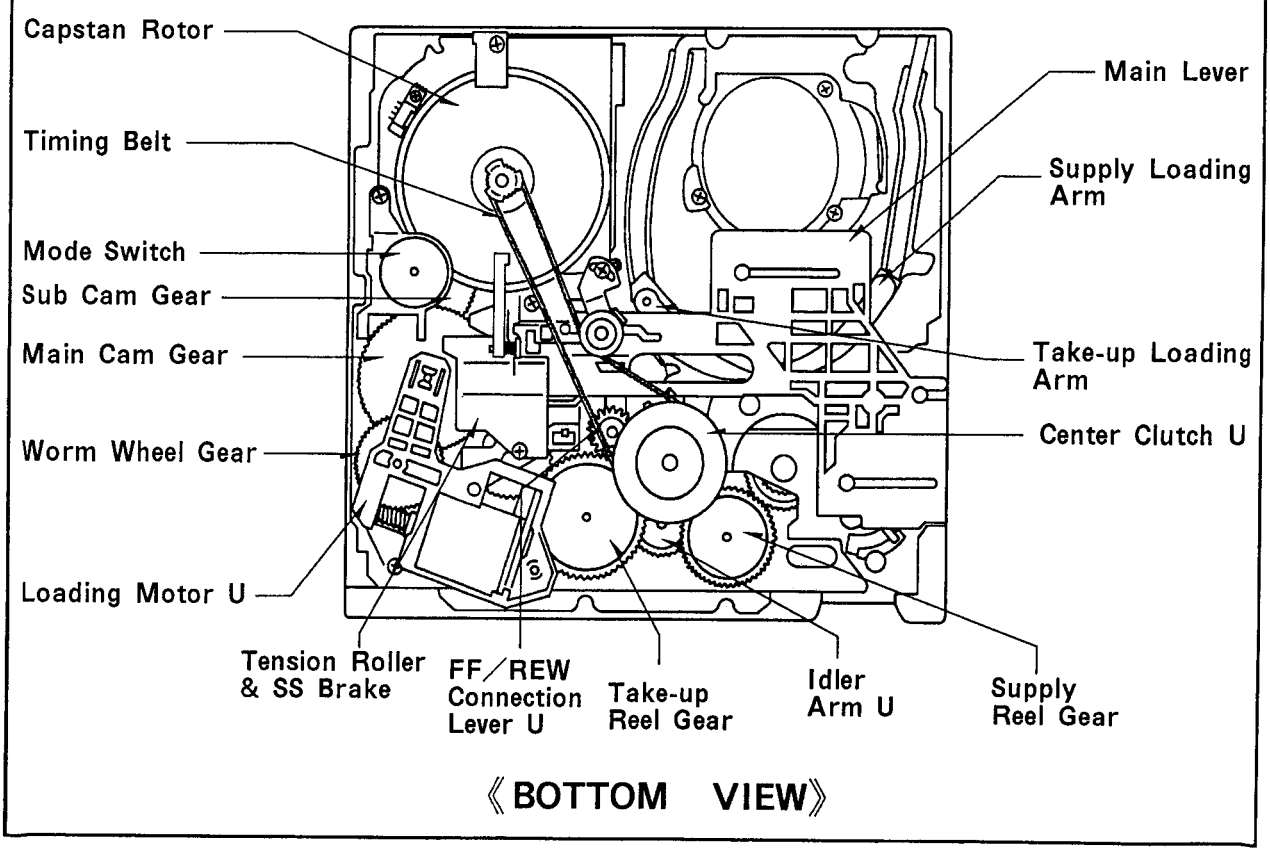
The regular maintenance is important to maintain the initial specification of the unit and prevent tape damage. The specified servicing fixture must be used to conduct adjustment.
The following fixtures, tools and measuring equipments are required to conduct complete Mechanical Adjustments.

VFM8080HQFP: VHS Alignment Tape 	VFK0948: Check Light 	VFK0326: Hex Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2.0, 2.4, 3.0mm) 
VFK0329: Post Adj. Screwdriver 	VFK0335: Rataining Ring Remover 	VFK0132: Back Tension Meter (Tentelometer,Made in U.S.A.) 
MOR265: Morlytone Grease (Black) (for metal parts) 	VFK0851: Center Fixing Tool 	VFK27: Head Cleaning Stick 
VFK0680: S.C.R. Grease (White) (for plastic parts) 	VFK66 ; Fan Type Tension Gauge 	VFK0330: Fine Adj. Screwdriver 

1-7. Mechanical Parts Location



《TOP VIEW》



《BOTTOM VIEW》

SECTION 2
MAINTENANCE PROCEDURE

The MAINTENANCE CHART please refer to the Maintenance Section which are shown in service manual for each model.

2-1. Replacement of the Upper Cylinder Unit

1. Unscrew 2 screws (A).
2. Unsolder arrows marked portions on the top of the Upper Cylinder as shown in Fig.M1.
3. Remove the Upper Cylinder.
4. The Upper Cylinder can be reinstalled by reversing the removal procedure.
   However, when insert the Upper Cylinder be extremely carefully so that marked portion of P.C.board of the Upper Cylinder correctly matches to mark of the Lower Cylinder as shown in Fig.M2.

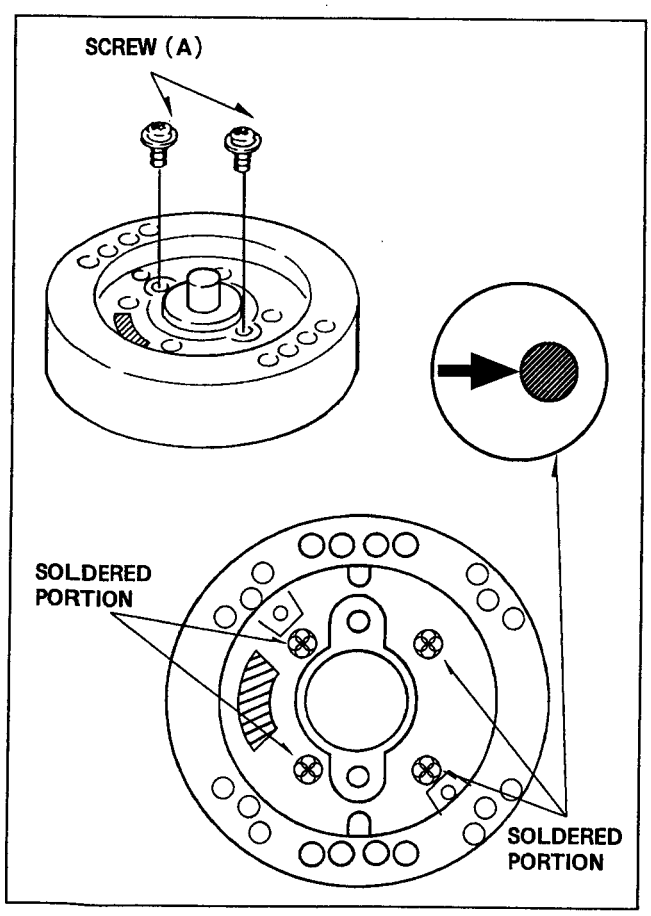


Fig.M1

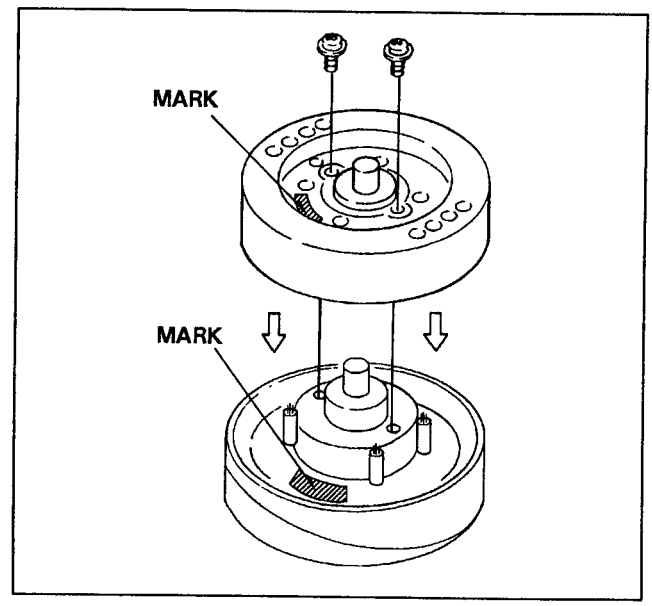


Fig.M2

<NOTE>
After reinstall the Upper Cylinder Unit should be perform Mechanical and Electrical adjustments.
3-2. FINE ADJUSTMENT of P2 and P3 POSTS
3-6. HORIZONTAL POSITION ADJUSTMENT

2-2. Replacement of Cylinder Unit

1. Remove the Earth Plate.
2. Unscrew 2 screws both side of Head Amp Unit and lift up the Head AMP.
3. Unscrew 3 screws (B) from back side of the mechanical chassis then remove the Cylinder Unit.
4. The Cylinder Unit can be reinstalled by reversing the removal procedure.

<Note>
After reinstall the Cylinder Unit should be perform Mechanical and Electrical adjustments.

3-2. FINE ADJUSTMENT of P2 and P3 POSTS
3-6. HORIZONTAL POSITION ADJUSTMENT

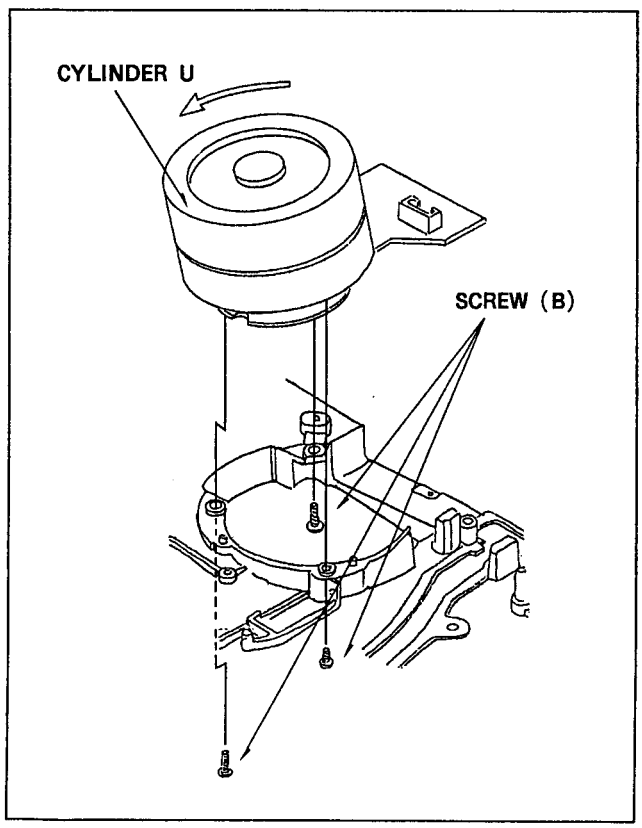


Fig.M3

2-3. Replacement of A/C HEAD Unit

1. Unscrew 3 screws (C)(D)(E) with the 3 springs then remove the A/C Head unit from the A/C Head Base.
2. The A/C Head Unit can be reinstalled by reversing the removal procedure.

<Note>
A space should be equality between the A/C Head U and the A/C Head Base when reinstall the A/C Head unit.

After reinstall the A/C Head Unit should be perform Mechanical and Electrical adjustments.

3-2. FINE ADJUSTMENT of P2 and P3 POSTS
3-3. COARSE ADJUSTMENT of A/C HEAD HEIGHT(1)
3-4. COARSE ADJUSTMENT of A/C HEAD HEIGHT(2)
3-5. FINE ADJUSTMENT of A/C HEAD HEIGHT
3-6. HORIZONTAL POSITION ADJUSTMENT

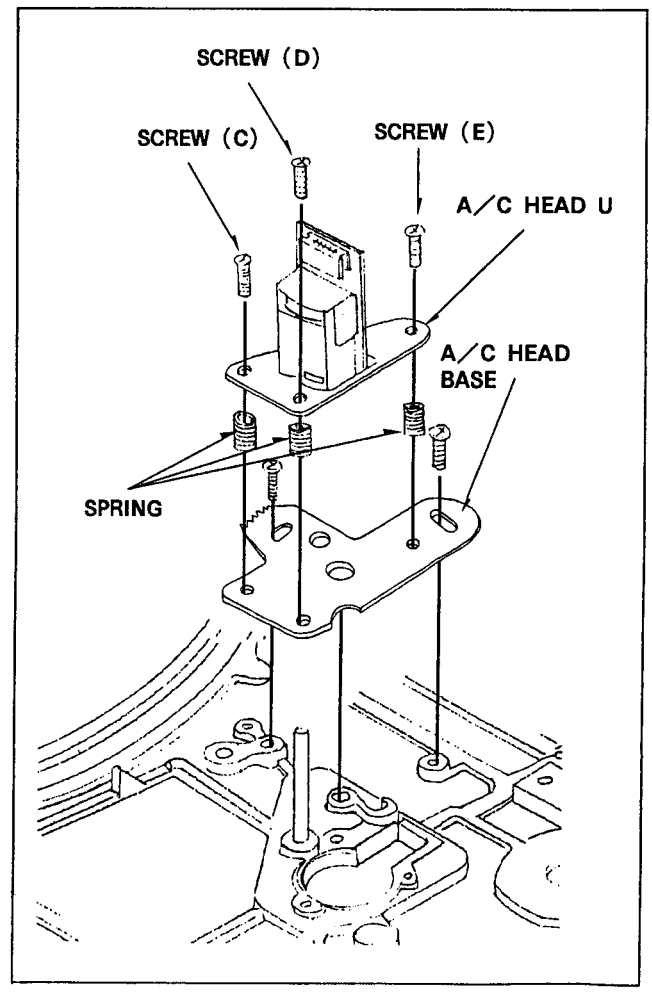


Fig.M4

2-4. Replacement of Full Erase Head Unit

1. Disconnect a connector (A).
2. Unscrew screw (F) then remove the FE Head.
3. FE Head Unit put into hole on the mechanical chassis and can be reinstalled by reversing the removal procedure.

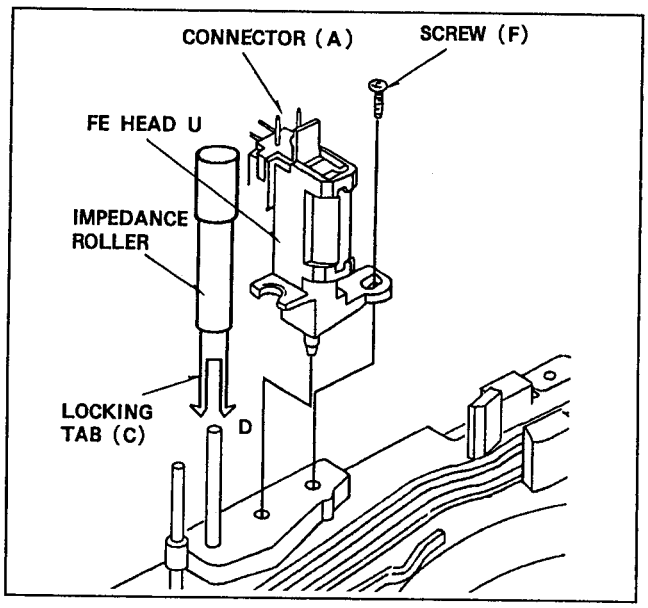


Fig.M5

2-5. Replacement of Capstan Rotor Unit and Stator Unit

1. Remove the Rotor Stopper.
2. Carefully lift up the Capstan Rotor from the Capstan Housing, taking care so as not loose the 2 Oil Seals.
3. Unscrew 3 screws (G) and remove the Capstan Stator Unit as shown in Fig.M6.
4. The Capstan Rotor and Stator can be reinstalled by reversing the removal procedure.

<Note>
After reinstall the Capstan Rotor and Stator Units should be perform Mechanical adjustment.

3-9. ADJUSTMENT of CAPSTAN HOUSING & STATOR
3-10. ADJUSTMENT of THRUST GAP
3-11. ADJUSTMENT of FG GAP

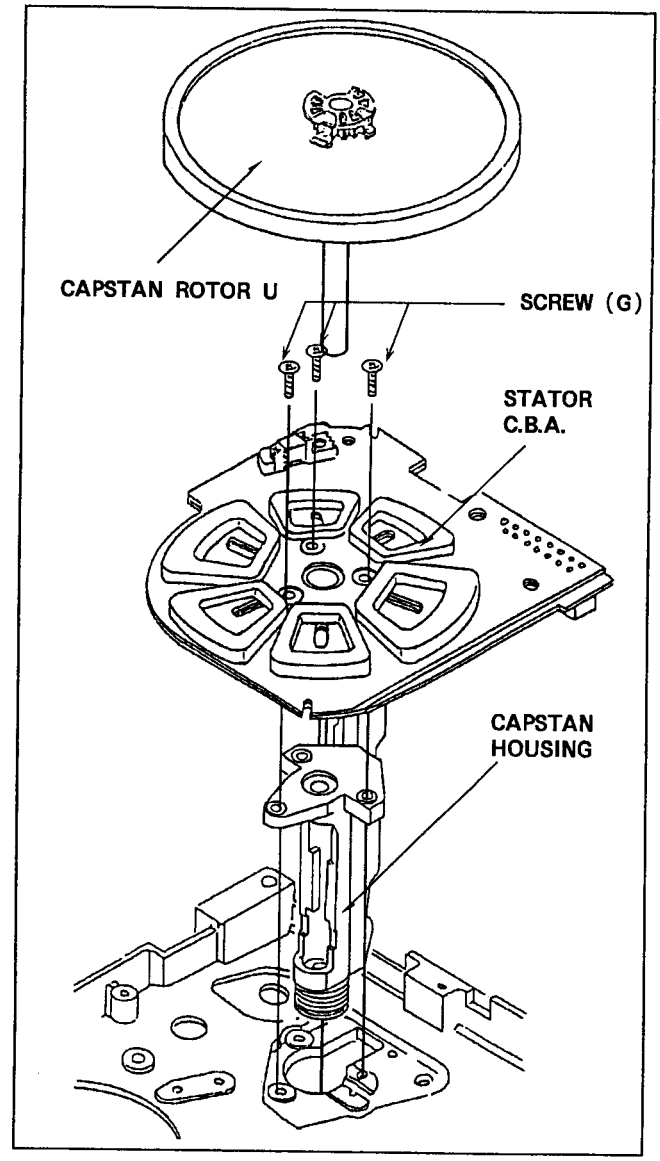


Fig.M6

2-6. Replacement of Impedance Roller Unit

1. Remove the Full Erase Head Unit with removal procedure(2-4).
2. Unlock then locking tab to direction of arrow mark as shown in Fig.M5 and remove the Impedance Roller Unit.
3. The Impedance Roller Unit can be reinstalled by reversing the removal procedure.

2-7. Replacement of Pinch Arm Unit

1. Unlock the locking tab on the Opener Piece and remove it from the shaft.
2. Remove the Pinch Arm Unit from the shaft.
3. The Pinch Arm Unit can be reinstalled by reversing the removal procedure.

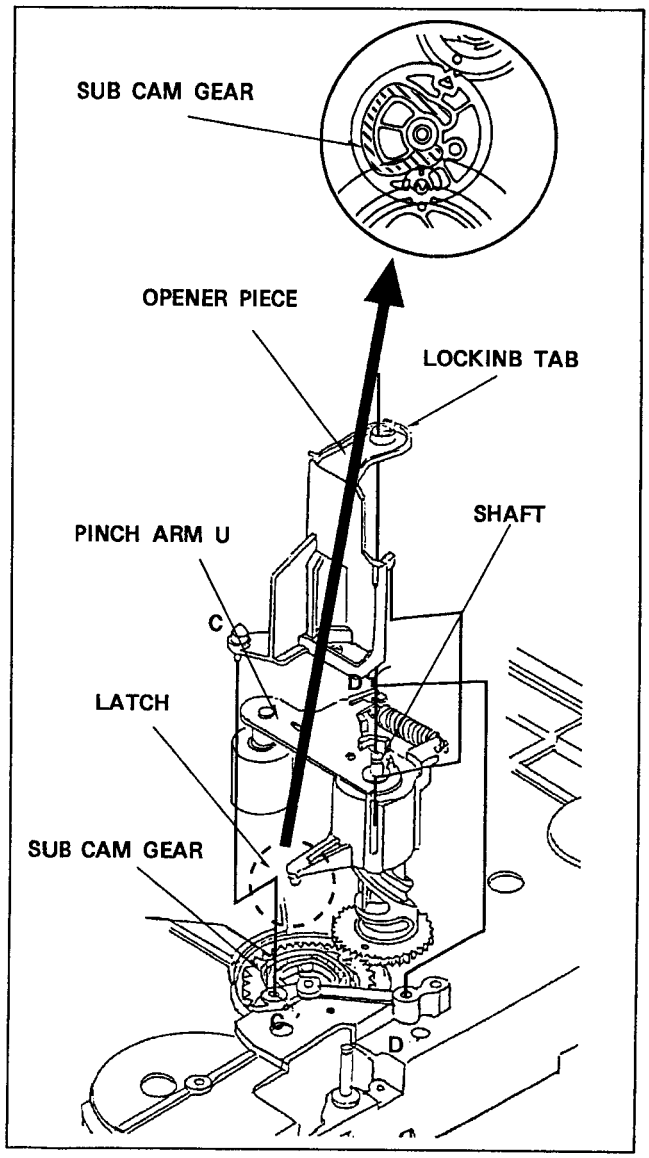


Fig.M7

2-8. Replacement of Take-up and Supply Reel Base Units

A. Supply Reel Base Unit

1. Remove the Tension Band Unit on the Supply Reel Base Unit.
2. Push the Supply main Brake Arm to direction of arrow mark and unlock the locking tab on the Supply Reel Base then pull up the Supply Reel Base Unit as shown in Fig.M8.
3. The Supply Reel Base Unit can be reinstalled by reversing the removal procedure.

B. Take-up Reel Base Unit

1. Push the Take-up Main Brake Arm to direction of arrow mark and unlock the locking tab on the top of Take-up Reel Base then pull out the Supply Reel Base Unit as shown in Fig.M8.

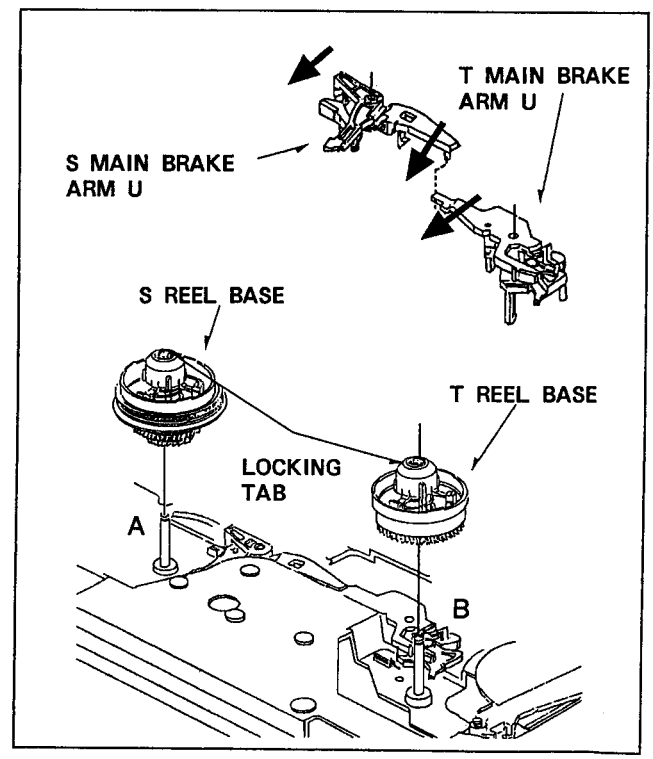


Fig.M8

2-9. Replacement of Take-up and Supply Brake Arm Unit.

1. Unlock the locking tab (A) to direction of arrow mark and lift up the Supply Brake Arm Unit.
2. Unlock the locking tab (B) and lift up the Take-up Brake Arm Unit.
3. Both Brake Arm Units can be reinstalled by reversing the removal procedure.
   However the boss (C) of the Supply Brake Arm Unit insert to hole (E) of mechanical chassis while pushing the Main Lever to direction of arrow mark as shown in Fig.M9. (expanded view)

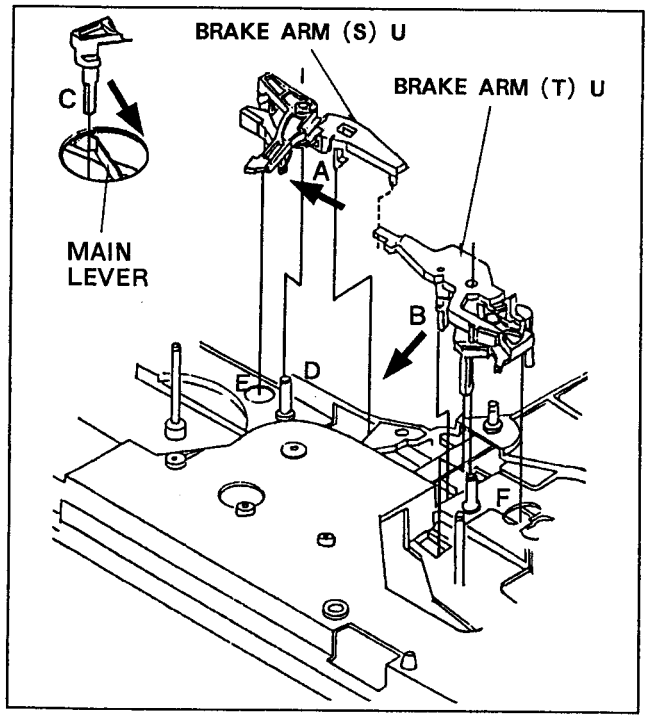


Fig.M9

2-10. Replacement of Tension Band Unit

1. Remove the cut washer (H) and lift up the Tension Arm Unit with the Tension Band and spring from the Tension Spring Arm.
2. Unlock the locking tab (A) to direction of arrow mark and remove the Tension Band from the Arm Unit.
3. Unlock the locking tab (B) and remove the Tension Band from the Tension Arm Unit.
4. The Tension Band Unit can be reinstalled by reversing the removal procedure.

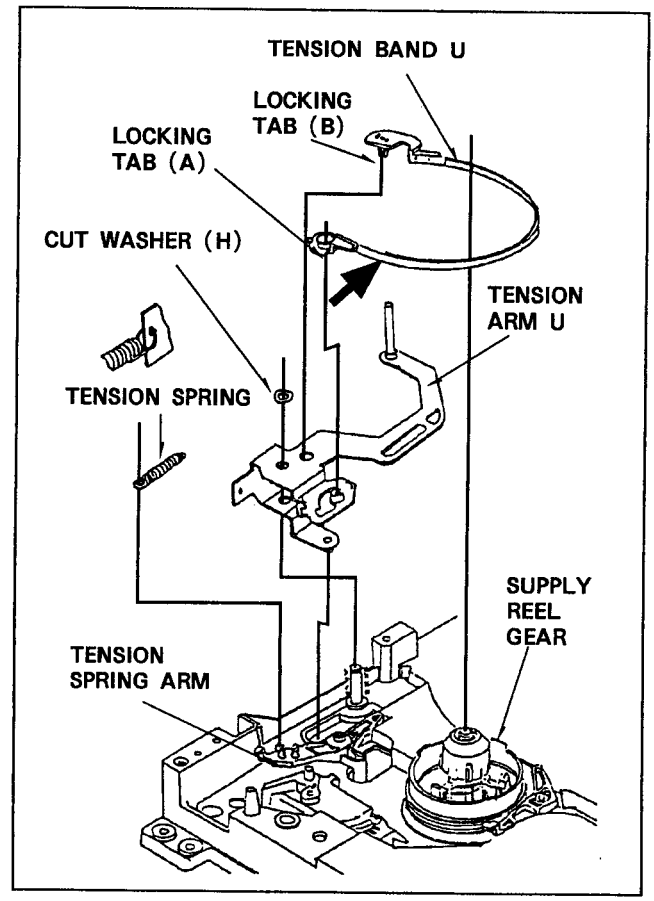


Fig.M10

2-11. Replacement of Loading Motor Unit

1. Unscrew screw (I).
2. Unlock the locking tab (A) from the top of the mechanical chassis.
3. Lift up the Loading Motor Bracket and push it to direction of arrow mark as shown in Fig.M11.
4. When reinstall the Loading Motor Unit, insert the locking hole (B') of Loading Motor Bracket Unit to shaft (B) on the mechanical chassis. Also a hole (C) of the loading Motor Unit must be matched to the shaft (C') as shown in Fig.M11.

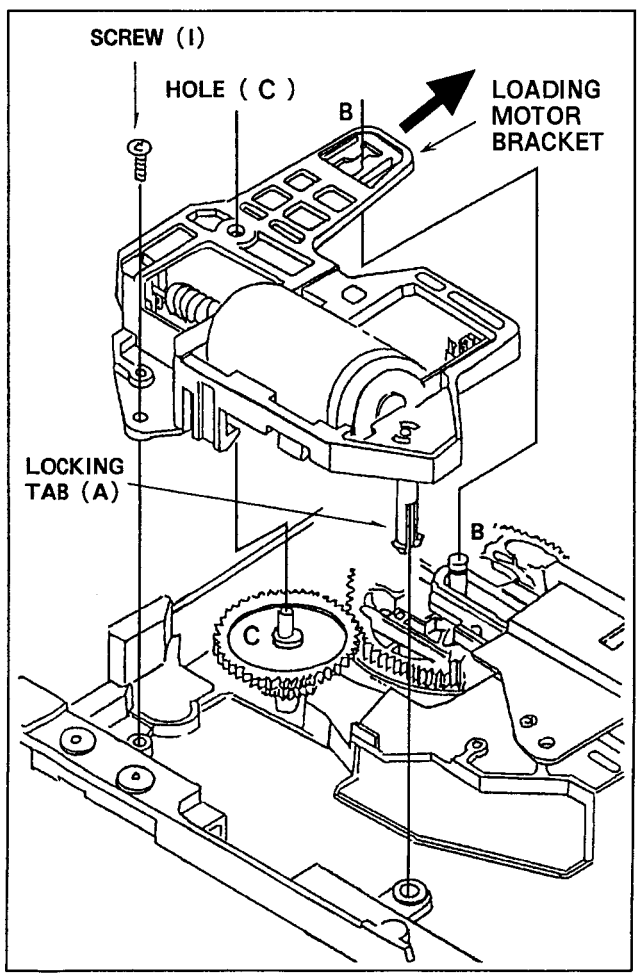


Fig.M11

2-12. Replacement of Cleaner Roller Unit

1. Unlock the locking tab (A) as shown in Fig.M12. and lift it up.
2. The Cleaner Roller Unit can be reinstalled by reversing the removal procedure.

3. Replacement of the Cleaner Rubber Unit.
   Hold the Cleaner Roller Unit and unlock the locking tab (B) then lift it up.

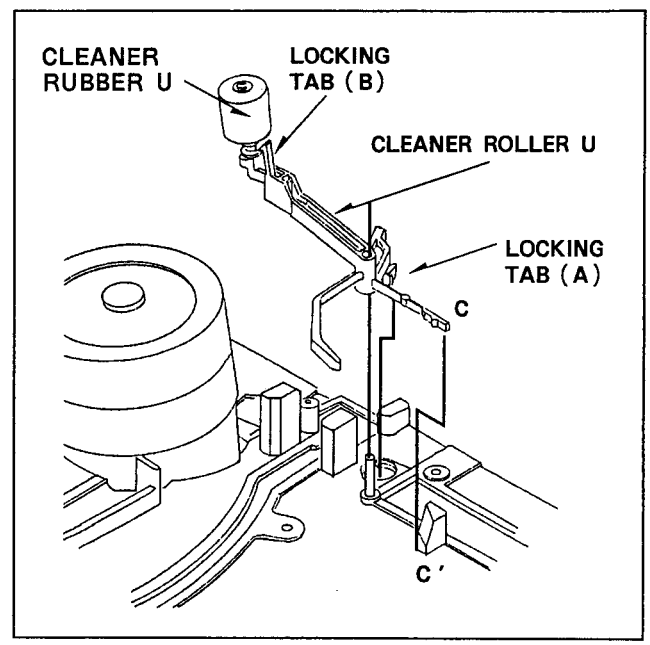


Fig.M12

2-13. Replacement of SS Brake Base Unit and Timing Belt

1. Remove the Timing Belt.
2. Unscrew (J) and (K) then remove SS Brake Base Unit.
3. SS Brake Unit and Timing Belt can be reinstalled by reversing the removal procedure.

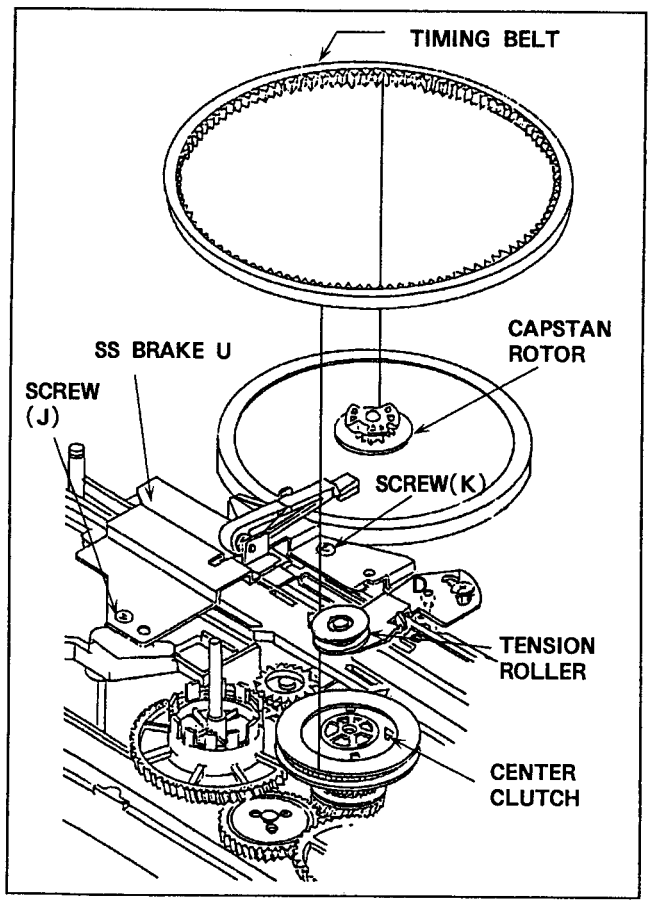


Fig.M13

2-14. Replacement of Supply & Take-up Inclined Base Unit

1. Remove SS Brake Unit, Main Lever Unit and Supply and Take-up Loading Arm Unit refer to SECTION 2. and 3. in this service manual.
2. Remove the Inclined Holder base (A) from back side of mechanism chassis.
3. Remove the Supply and Take-up Inclined Base Units.
4. The both Inclined Base Units can be reinstalled by reversing the removal procedure.

<NOTE>
After reinstall the Inclined Base Unit should be perform Mechanical adjustment.

3-2. FINE ADJUSTMENT of P2 and P3 POSTS
3-5. FINE ADJUSTMENT of A/C HEAD HEIGHT
3-6. HORIZONTAL POSITION ADJUSTMENT of A/C HEAD

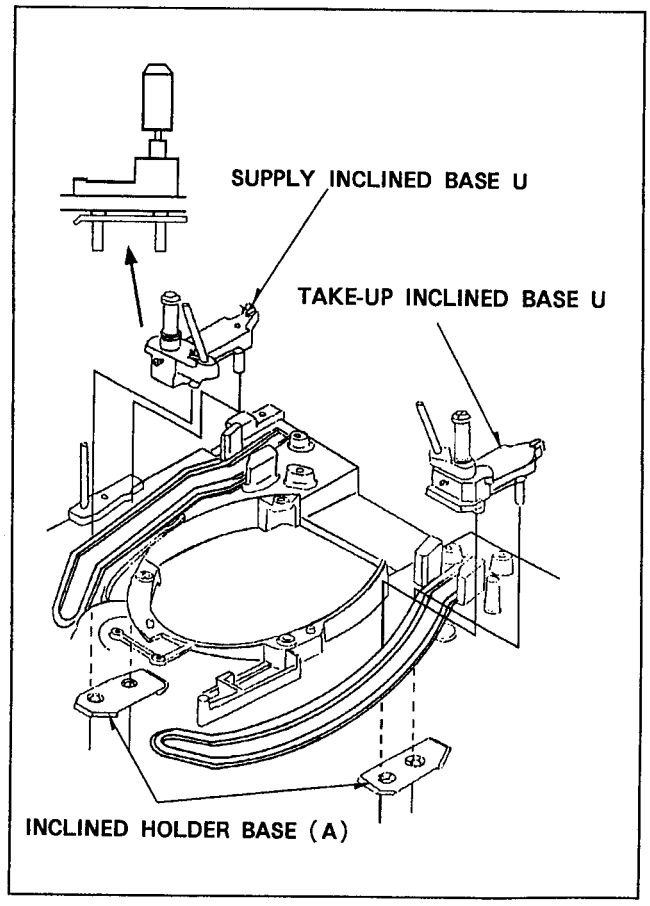


Fig.M14

SECTION 3
MECHANICAL ADJUSTMENT PROCEDURE

3-1. Coarse Adjustment of Tape Guide Post Height

1. Remove the Top Plate and Cassette Holder.
2. Turn the Loading Motor until the unloading completes.
3. Loosen the fixing screw of P2 and P3 Posts.
4. Rotate the P2 and P3 Posts clockwise to the end.
5. Rotate the P2 and P3 Posts twice counter-clockwise as shown in Fig.M15.
6. Install the Cassette Holder and Top Plate.
7. Playback the normal tape and make sure that the edge of not curing at the bottom or top end of the P1,P2,P3 and P4 Posts as shown in Fig.M17.

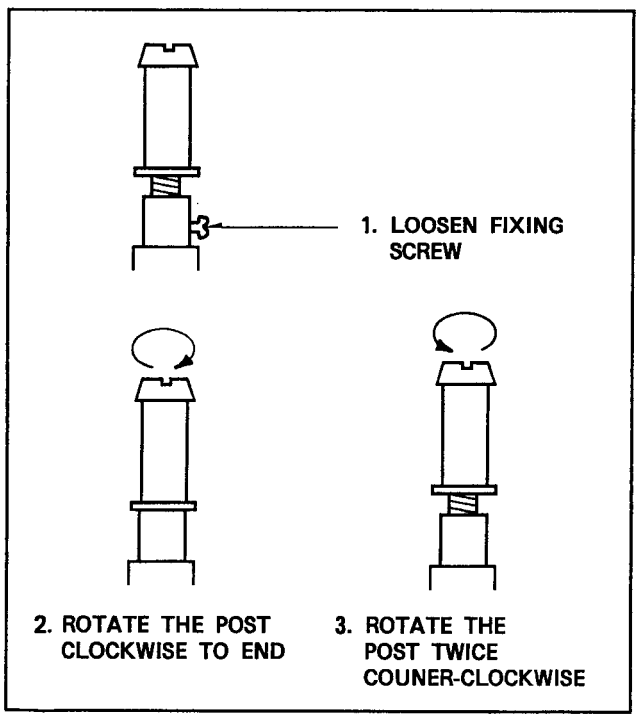


Fig.M15

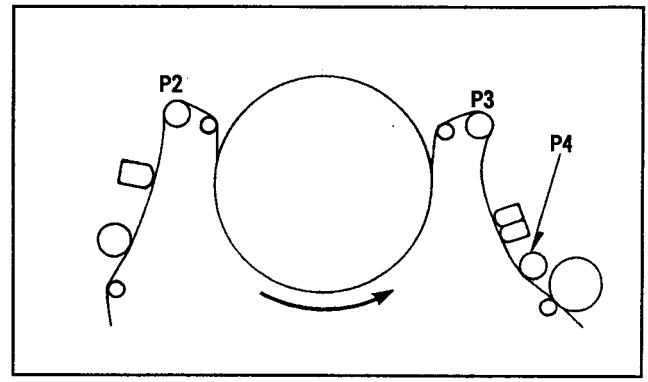


Fig.M16

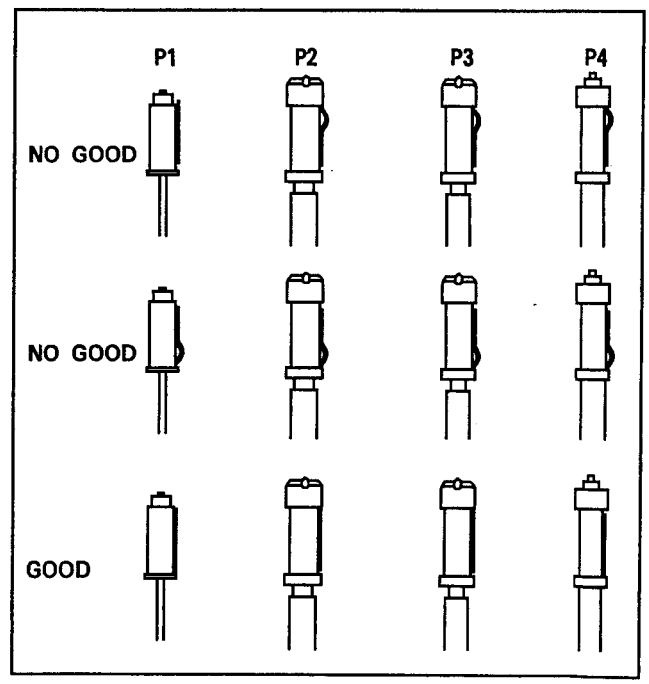


Fig.M17

3-2. Fine Adjustment of P2 and P3 Posts

1. Connect the oscilloscope to the Test Point of the HEAD AMP (Video RF Envelope) and the head switching pulse as a triggering signal.

<NOTE>
TEST POINT please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

2. Playback the 2nd portion of the alignment tape.
3. Press the tracking control button on the Front panel and adjust for maximum Video RF envelope.
4. If the RF envelope appears like example "A" or "B" in Fig.M18 then adjustment of the tape guide post (P3:Exit) is necessary.
5. Adjust the P3 post with the post adjustment screwdriver so that the RF envelope waveform at the exit portion becomes flat as shown in Fig.M18.
6. If the RF envelope appears like example "C" or "D" in Fig.M18 then adjustment of the tape guide post (P2:Entrance) is necessary.
7. Adjust the P2 post with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig.M18.

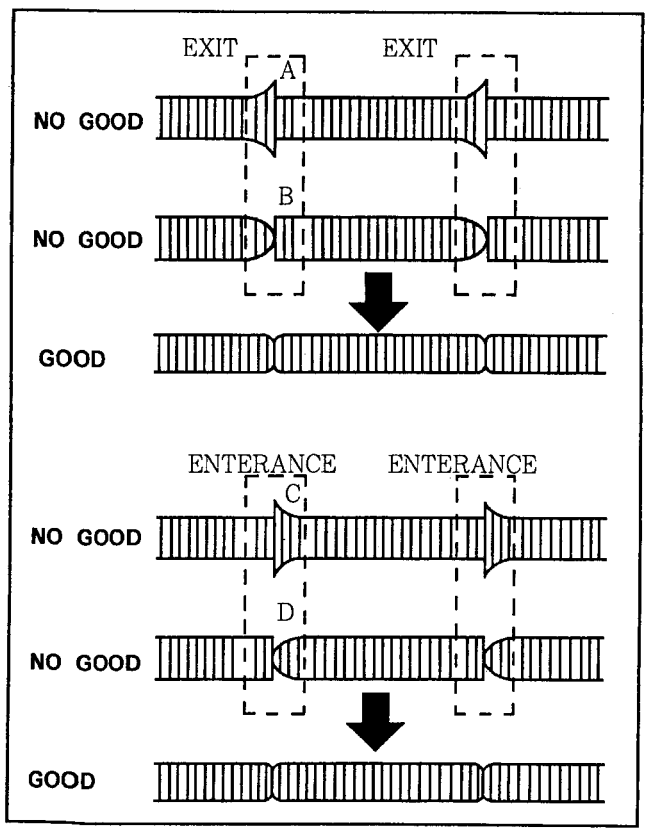


Fig.M18

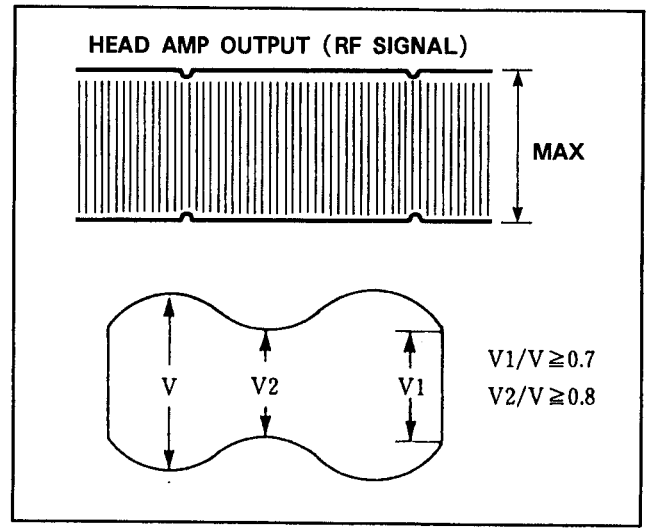


Fig.M19

3-3. Coarse Adjustment of A/C Head Height (1)

<NOTE>
This procedure should be performed only when the A/C Head is replaced.

1. Playback the normal tape.
2. Turn the 3 screws (A)(B)(C) mutually so that lower edge of tape running at lower edge of A/C Head and confirm a space as much as possible to flat between the A/C Head Unit and the A/C Head Base.

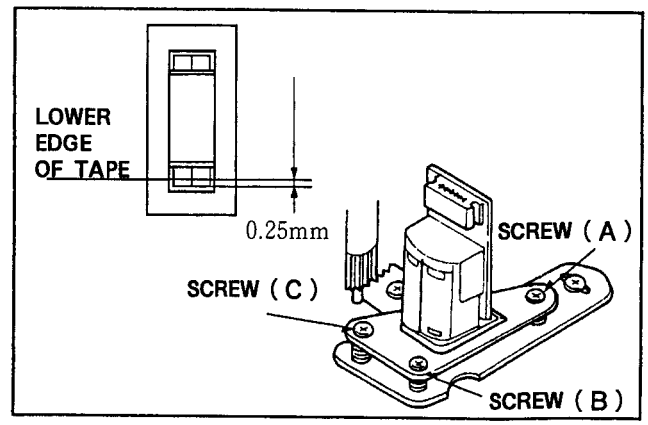


Fig.M20

3-4. Coarse Adjustment of A/C Head Height (2)

1. Playback the normal tape.
2. Rotate the screw (A) as shown in Fig.M20 until the wrinkle appears on the lower edge of tape at P4 Post.
3. Rotate the screw (B) until the wrinkle just disappear on the lower edge of tape at P4 Post.

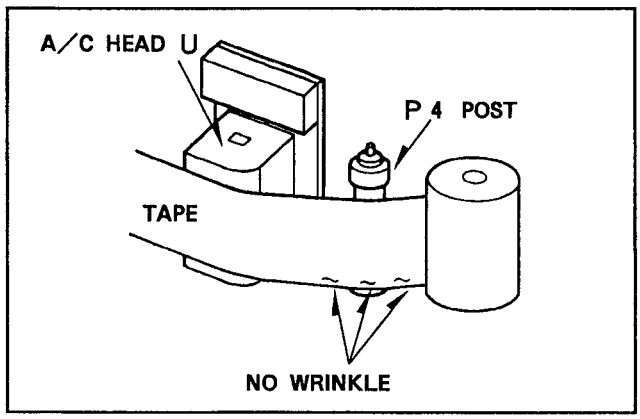


Fig.M21

3-5. Fine Adjustment of A/C Head Height

1. Connect the oscilloscope to the Audio output.
2. Playback the 2nd portion of the alignment tape.
3. Rotate the screw (C) so that audio signal becomes maximum.

<When moving the A/C Head up>

1. Rotate the screw (A) counter-clockwise until the wrinkle appears on the lower edge of tape at P4 Post.
2. Rotate the screw (B) counter-clockwise until just disappears on the lower edge of tape at P4 Post.
3. Rotate the screw (C) counter-clockwise until the audio signal is maximized.

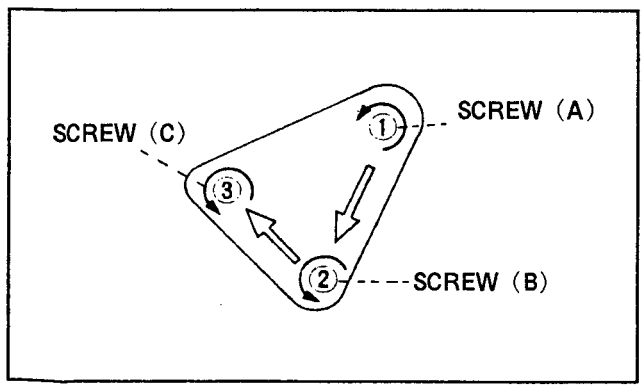


Fig.M22

<When moving the A/C Head down>

1. Rotate the screw (B) clockwise until the wrinkle appears on the lower edge of tape at P4 Post.
2. Rotate the screw (A) clockwise until the wrinkle just disappear on the lower edge of tape at P4 Post.
3. Rotate the screw (C) clockwise until the audio signal is maximized.

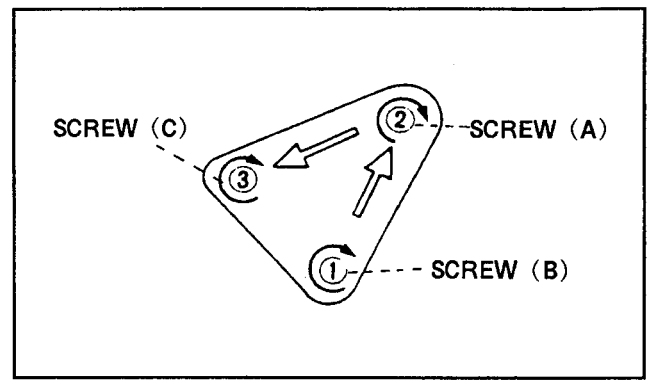


Fig.M23

3-6. Horizontal Position Adjustment of A/C Head.

<NOTE>
TEST POINT and JUMPER WIRE position, please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

1. Set the tracking control into the center fix position by connect a jumper wire on the MAIN C.B.A.
2. Connect the oscilloscope to the Audio output, Video RF envelope on the Head Amp test point and head switching pulse on the Head Amp test point as for triggering.
3. Playback the 4th portion of the alignment tape.
4. Loosen the 2 screws (D)(E).
5. Adjust the A/C Head Base (F) so that the phase of audio drop-out and RF video drop-out becomes the same as possible. Fig.M24.
6. Playback the 2nd portion of the alignment tape.
7. Adjust the A/C Head Base (F) until the video RF signal is maximized.
8. Carefully tighten screw (D) with hold the A/C Head Base position with the Fine Adjustment Gear Driver then tighten screw (E).

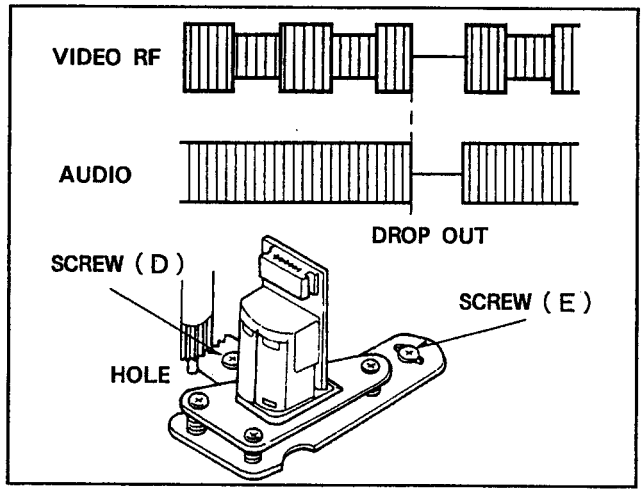


Fig.M24

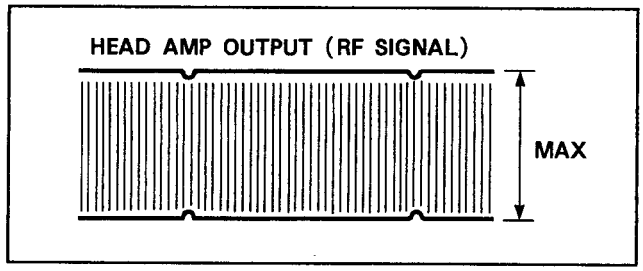


Fig.M25

3-7. Adjustment of Tension Post Position

1. Remove the Top Plate and Cassette Holder.
2. Turn the Loading Motor until the loading completes.
3. Adjust the hole of the Tension Band Unit by Hex wrench so that the left edge of the Impedance Roller and Tension Arm Unit as shown in Fig.M26.

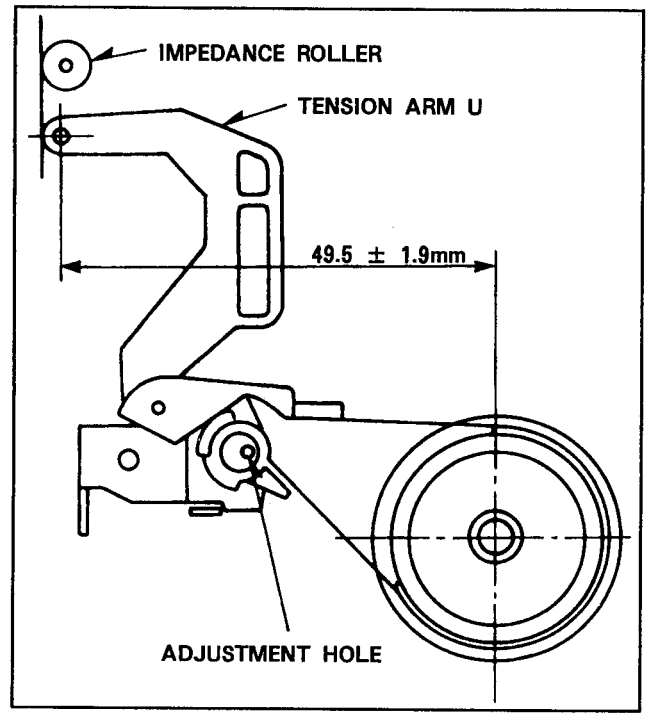


Fig.M26

3-8. Adjustment of Back Tension

1. Playback the cassette tape from the begging of tape and wait until tape movement has stabilized.
2. Insert the back tension meter into the path of the tape and confirm the back tension to be within specification as shown in Fig.M27.
3. If back tension is not in the specification, change the spring notch as shown in Fig.M28.

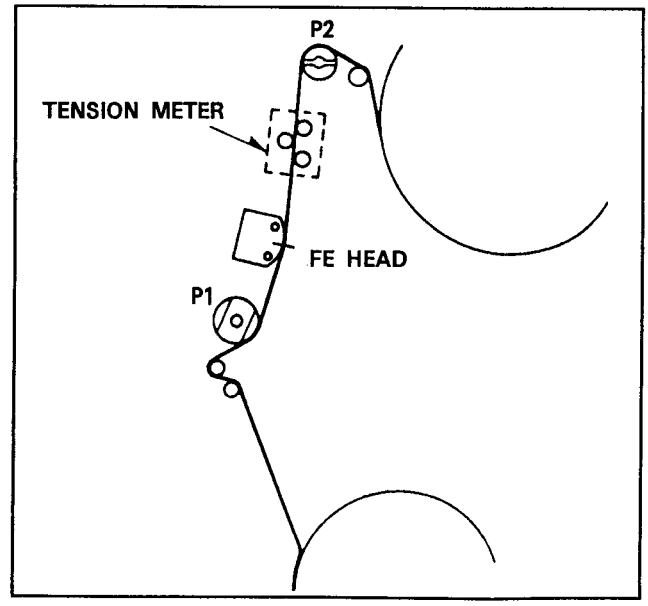


Fig.M27

<NOTE>
Specification of Back Tension, please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

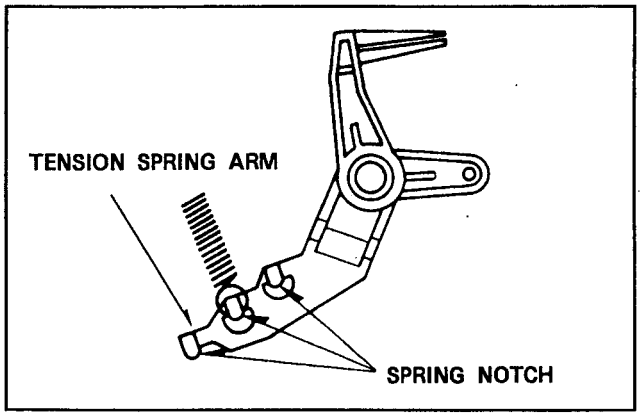


Fig.M28

3-9. Adjustment of Capstan Housing & Stator.

1. Install the Capstan Housing into the mechanical chassis and place the Capstan Stator into position.
2. Loosely tighten 3 screws (G).
3. Insert the Center Fixing Tool (VFK0851) as shown in Fig.M29.
4. Tighten 3 screws (G).
5. Remove the Center Fixing Tool.

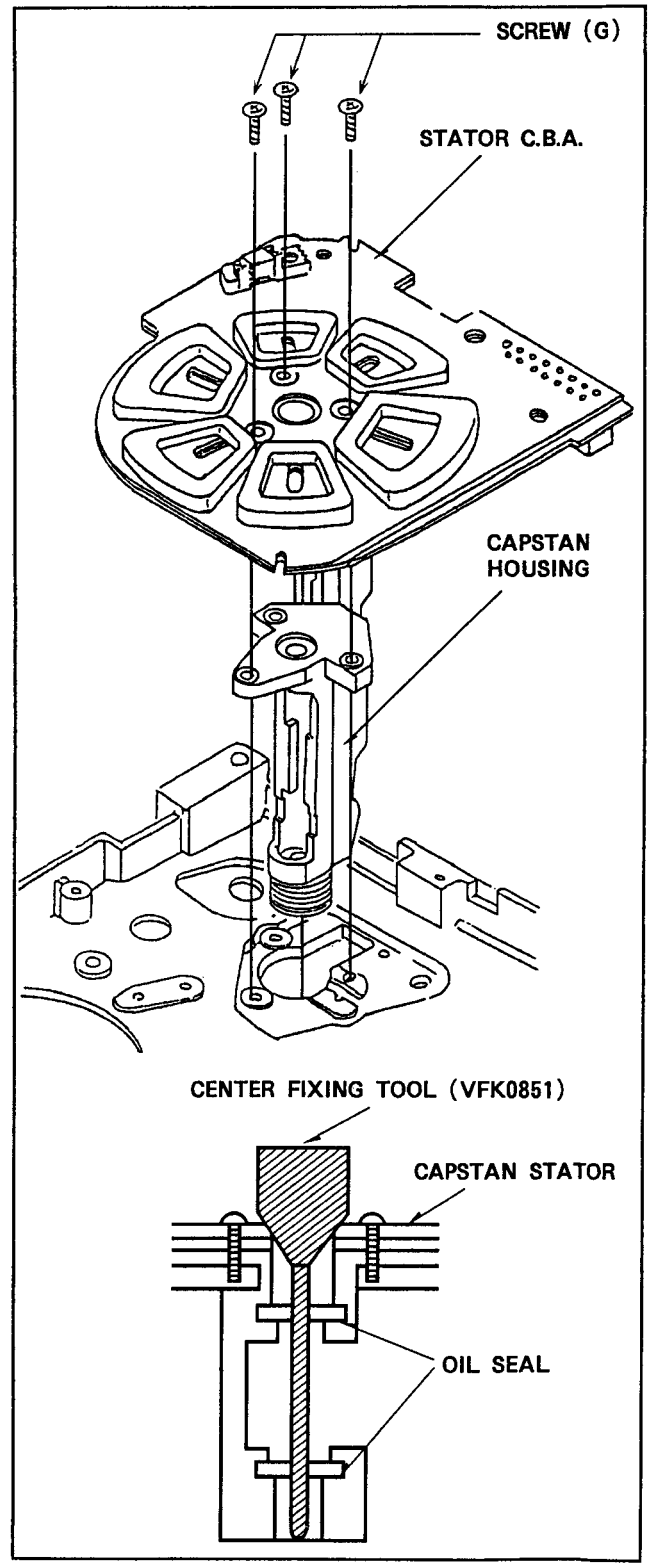


Fig.M29

3-10. Adjustment of Thrust Gap

1. Turn the Thrust Adjustment Screw clockwise to until the Capstan Rotor just separate from the Capstan Stator while rotating the Capstan Rotor by hand.
2. Turn the Thrust Adjustment Screw clockwise to 180 degrees from point at step 1.
3. Set the 2 Oil Seal to edge of the Capstan Housing as show in Fig.M30.

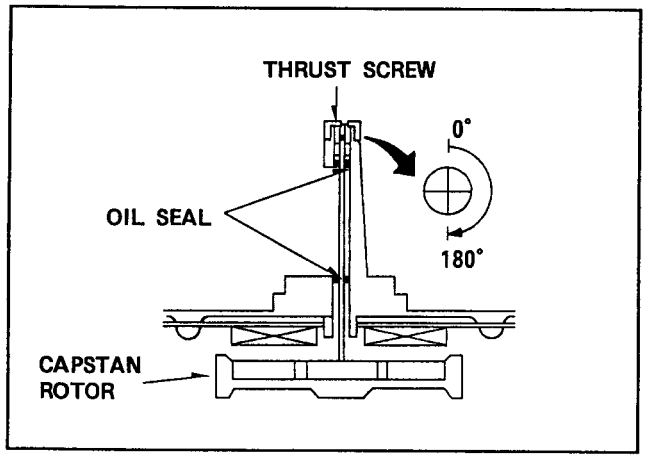


Fig.M30

3-11. Adjustment of FG GAP

1. Loosen screw (H) and set the Fine Adjustment Screw Driver in the hole on the Capstan Stator Unit.
2. Adjust the gap between FG Head and the Capstan Rotor.
3. After adjustment, tighten a screw (H).

<NOTE>
Specification of FG GAP, please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

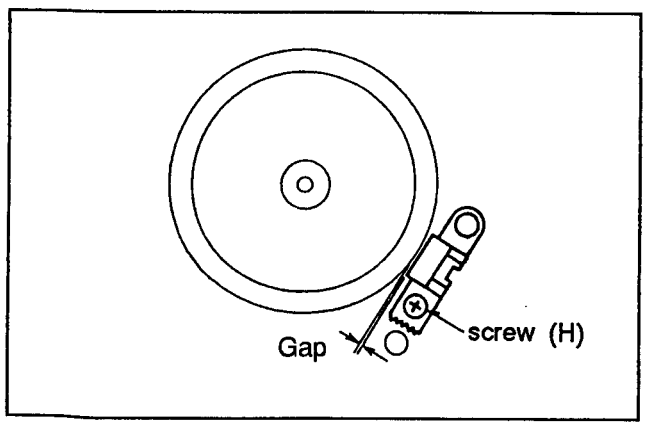


Fig.M31

3-12. Pressing Force Confirmation of the Pressure Roller

1. Playback the end portion of the 120 minutes tape.
2. Set the Fan type tension gauge to point (A) and push to direction indicated by the arrow (B) as shown in Fig.M32.
3. Confirm that reading of tension gauge is in specification at momentary stop the tape running.

<Note>
Specification of PRESSING FORCE, please refer to the MECHANICAL ADJUSTMENT INFORMATION which are shown in service manual for each model.

If the pressing force is not in specification, change the pressure spring.

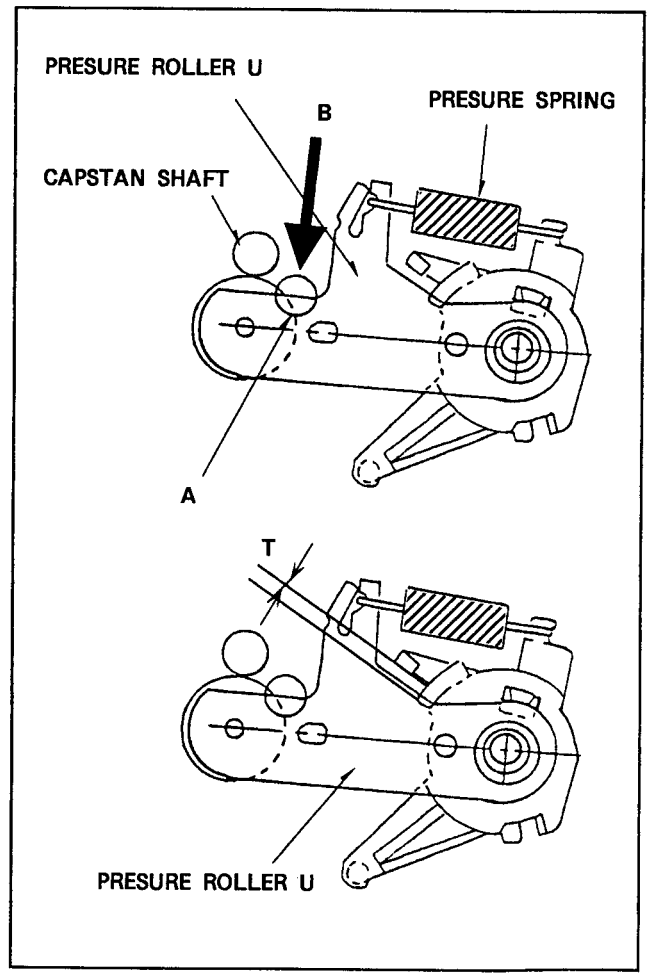


Fig.M32

SECTION 4
ASSEMBLY & PHASE ADJUSTMENT PROCEDURE

4-1. Assembly Procedures of Mechanism

The gear phase alignment is performed in the cassette down position and is crucial for the K-Mechanism to operate correctly.

1. Top view of gear phase alignment marks.
   There are alignment marks on the pinch cam gear and sub cam gear. there is one alignment mark on the carriage gear.

2. Bottom view of gear phase alignment marks.
   There are alignment marks on take-up loading gear and supply loading gear. There is an additional mark on the take-up loading gear that aligns with the mark on the main lever. There are alignment marks on the main cam gear and the sub cam gear. The mode switch gear mark aligns with a notch in the mode switch frame.

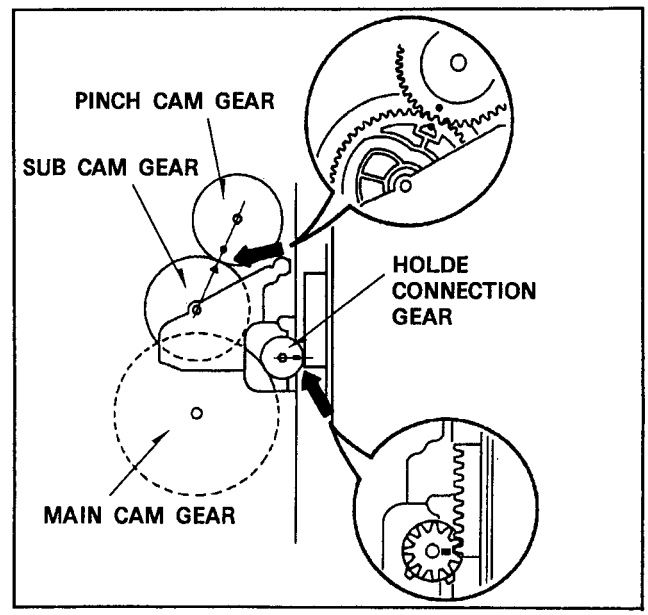


Fig.M33

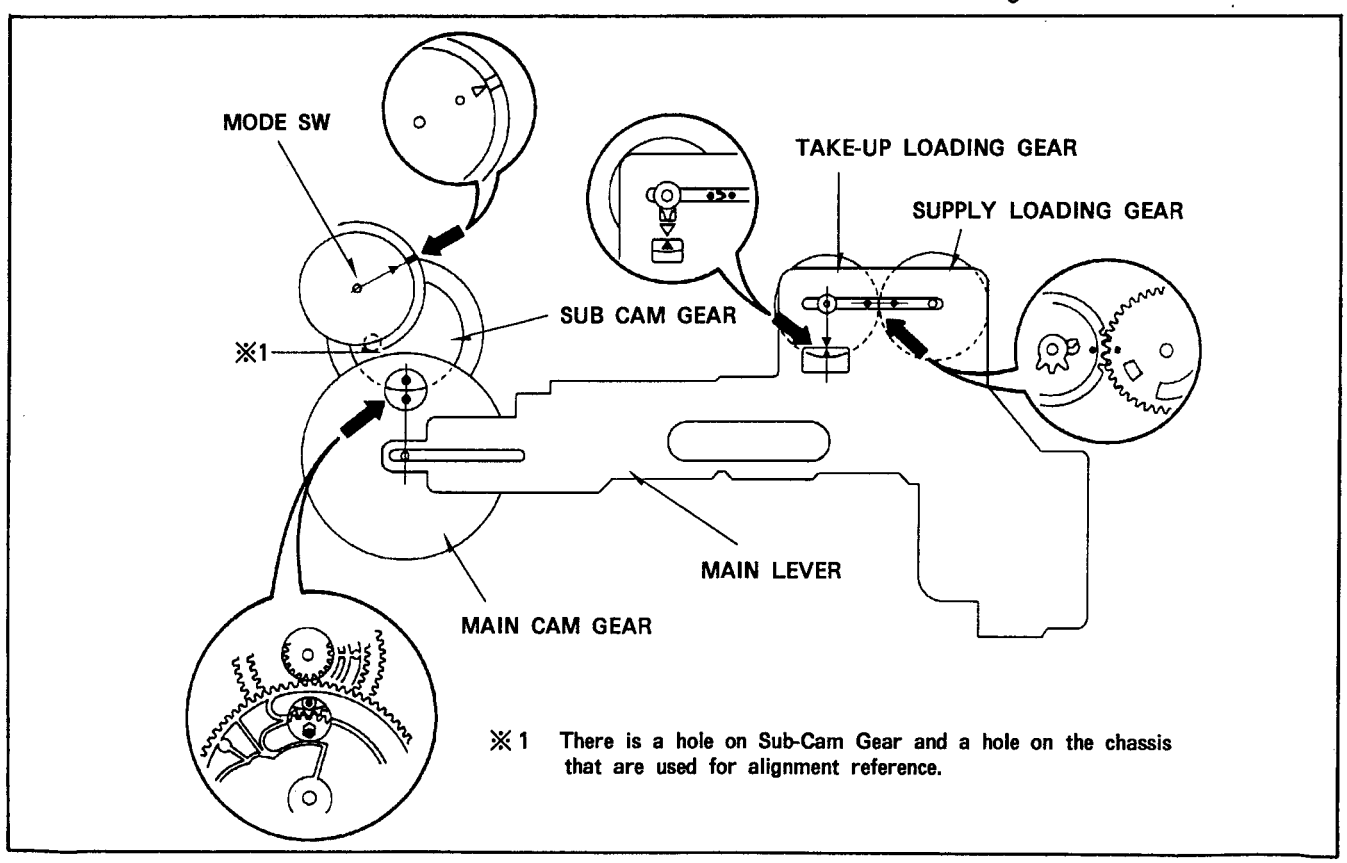

MODE SW
TAKE-UP LOADING GEAR
SUPPLY LOADING GEAR
SUB CAM GEAR
※1
MAIN LEVER
MAIN CAM GEAR
※1 There is a hole on Sub-Cam Gear and a hole on the chassis that are used for alignment reference.

Fig.M34

4-2. Assembly of parts on the Top Chassis

1. Install the Pinch Cam Gear onto shaft (A) and the P5 Arm Unit onto shaft (B).
2. Install the P5 Stopper Base with the cut washer (D) and screw (C).
3. Install the P5 Stopper on the P5 Stopper Base with latch (E).

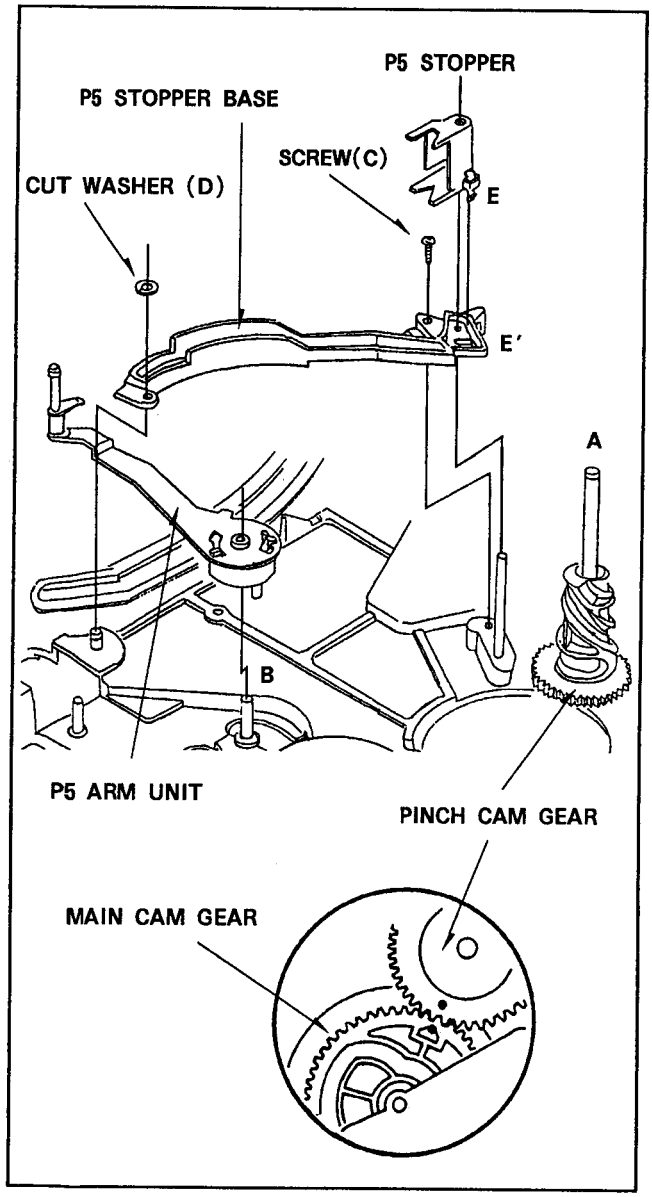


Fig.M35

4-3. Assembly of parts on the Bottom Chassis

1. Install the Idler Arm Unit onto shaft (F).
2. Install the Take-up and Supply Reel Gears onto shaft (G) and (H).
3. Install the Idler Regulator Level onto shaft (I) then install the Direct Lever.
4. Install the Center Clutch onto shaft (F) with the cut washer.

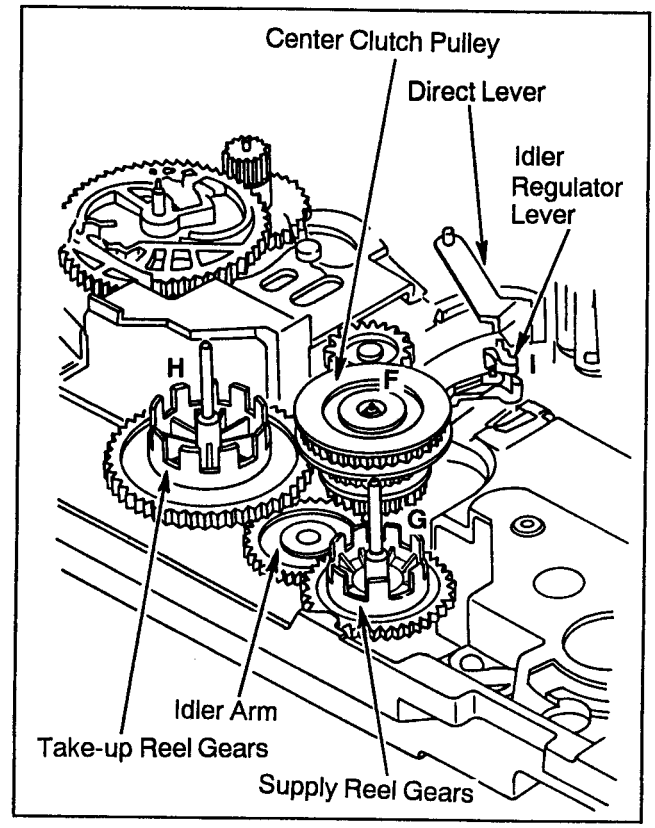


Fig.M36

4-4. Assembly of Main Cam Gear and Sub Cam Gear

1. Install the Sub Cam Gear on to shaft (J) so that the chassis hole aligns with hole in the Sub Cam Gear.
2. Rotate the Holder Connection Gear to position of arrow mark as shown in Fig.M37.
3. Install the Main Cam Gear onto shaft (K) so that the hole of the Main Cam Gear aligns with the hole in the Sub Cam Gear. Also insert the boss of the Take-up Tension Regulator Arm into the slot on the Main Cam Gear.

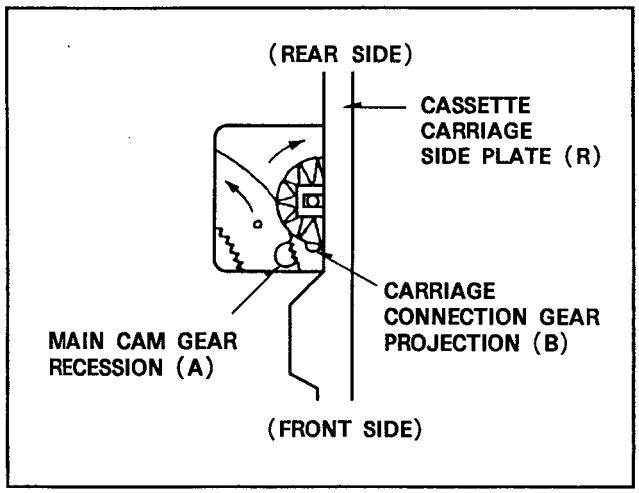


Fig.M37

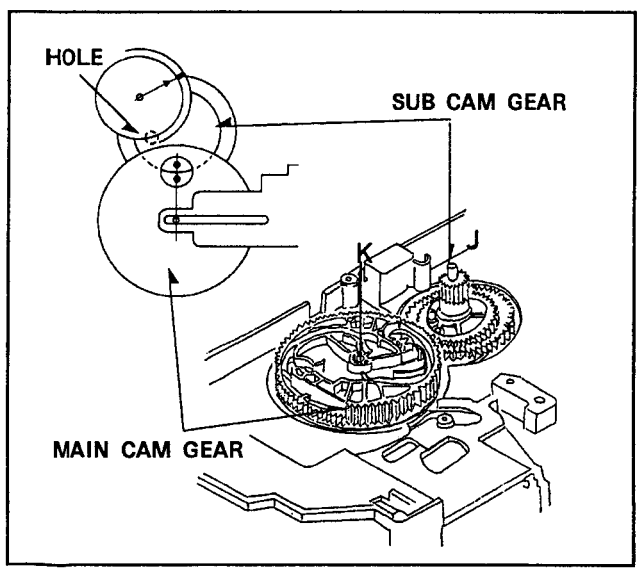


Fig.M38

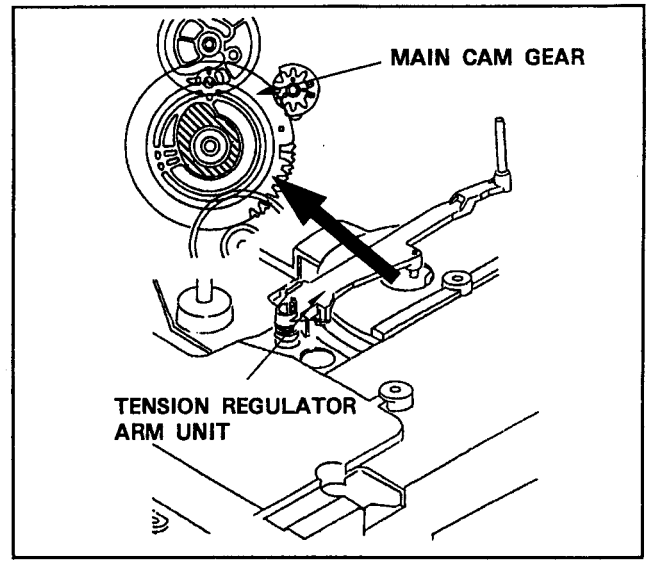


Fig.M39

4-5. Assembly of Mode Switch

1. Align a triangle mark on the Mode Switch Gear with the notch on the Mode Switch frame.
2. Confirm the Main and Sub Cam Gears aligned properly then install the Mode Switch with screw (L).

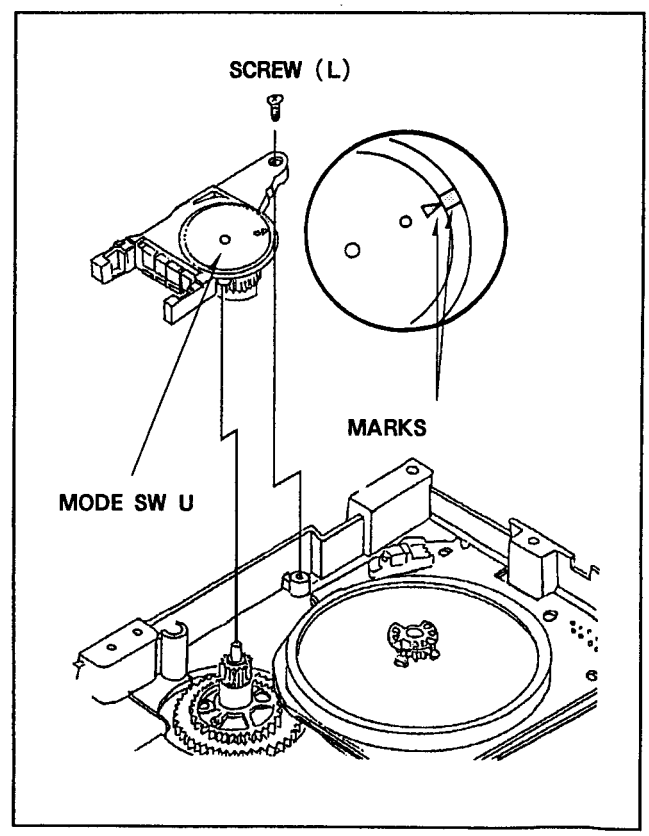


Fig.M40

4-6. Assembly of Take-up and Supply Loading Gears.

1. Install the Supply Loading Gear onto the shaft (S).
2. Install the Take-up Loading Gear onto the shaft (T) so that hole on the Take-up Loading Gear align with the hole on the Supply Loading Gear.
3. Install the Supply Loading Arm onto shaft of the Supply Inclined Base with washer.
4. Insert the Take-up Loading Arm onto shaft of the Take-up Inclined Base with washer.

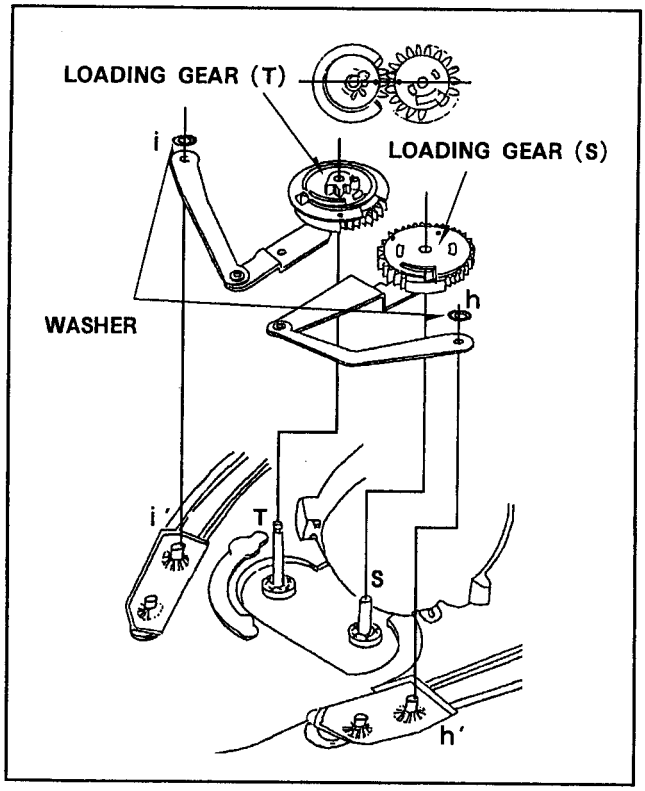


Fig.M41

4-7. Assembly of Main Lever

1. Install the Main Lever Arm checking that the boss of arms and shafts are in correct position and mark on the Main Lever Arm is aligned with mark on the Take-up Loading Gear.
2. Insert the 2 cut washer as shown in Fig.M42.

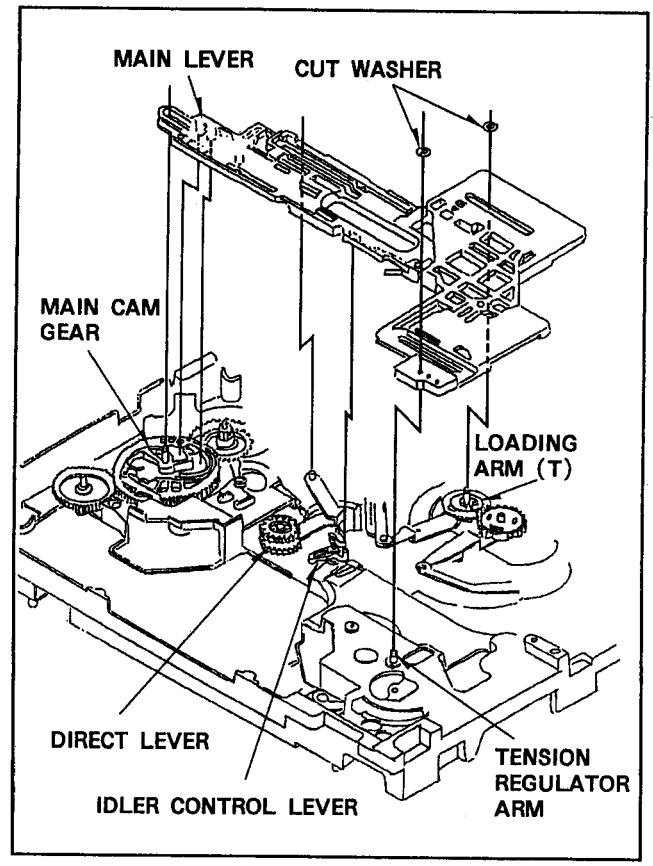


Fig.M42

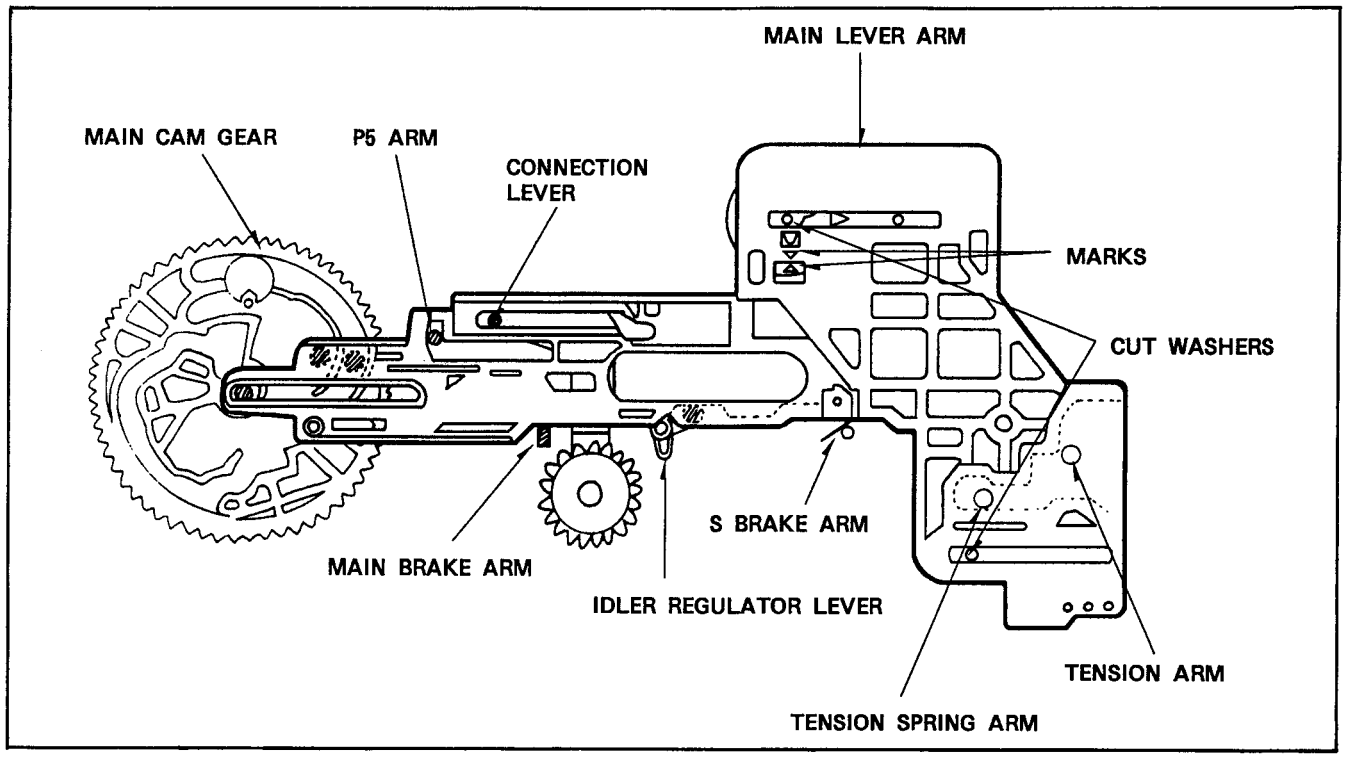


Fig.M43

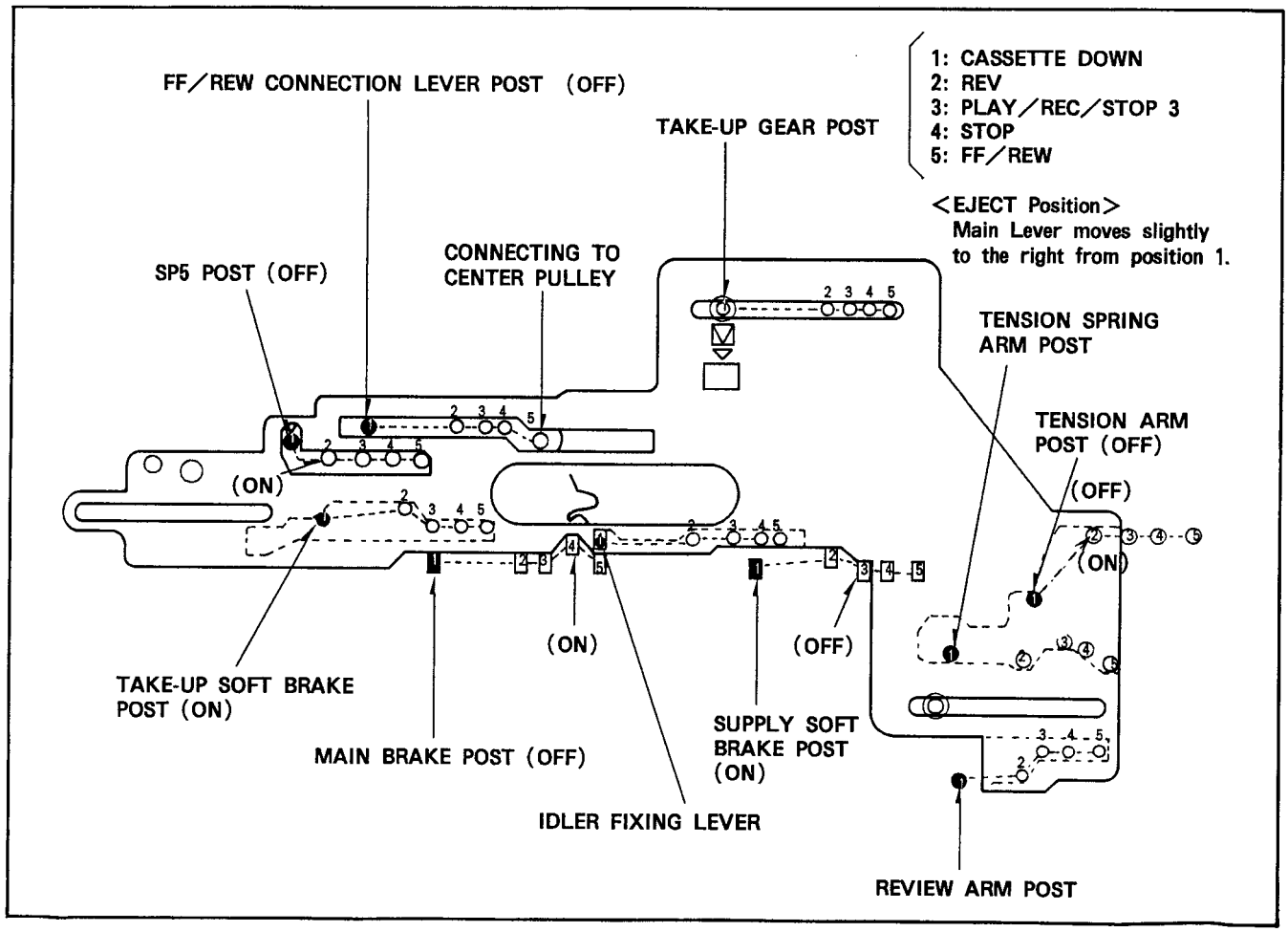


Fig.M44

4-8. Reinstall of the Cassette Compartment

1. Push the locking tabs to direction as shown in Fig.M45 and remove the Top Plate.

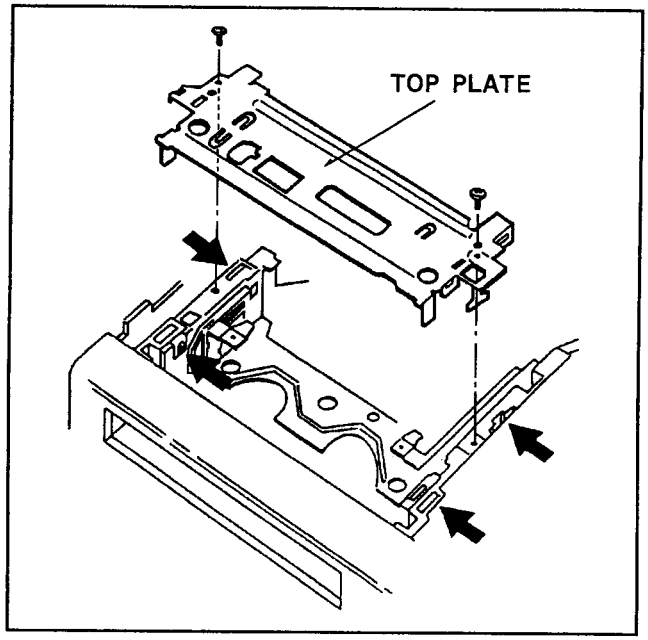


Fig.M45

2. Lift up the Cassette Holder Unit as shown in Fig.M46.

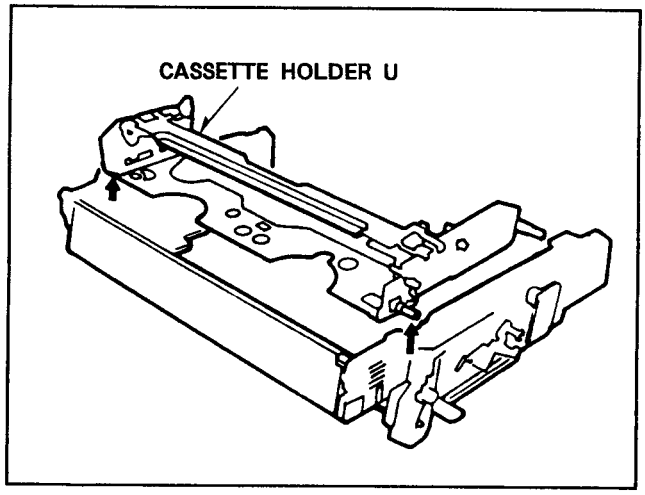


Fig.M46

3. Press the Wiper Arm to direction indicated by arrow mark so that the Wiper Arm comes to cassette down position completely as shown in Fig.M48. Confirm a triangle mark on the Wiper Arm aligns with the mark on the Rack (B) Unit.

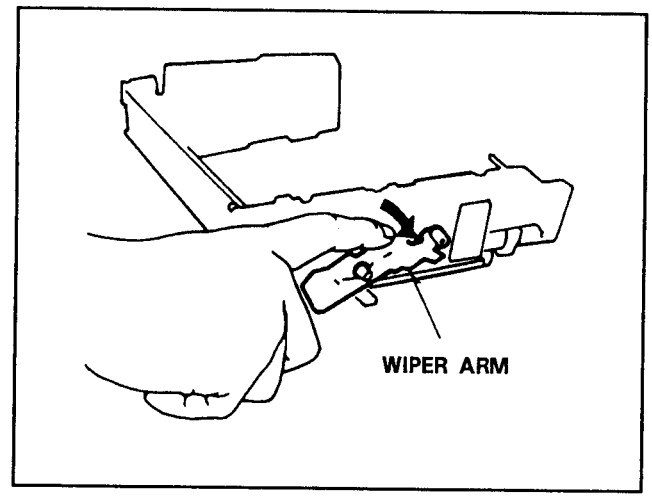


Fig.M47

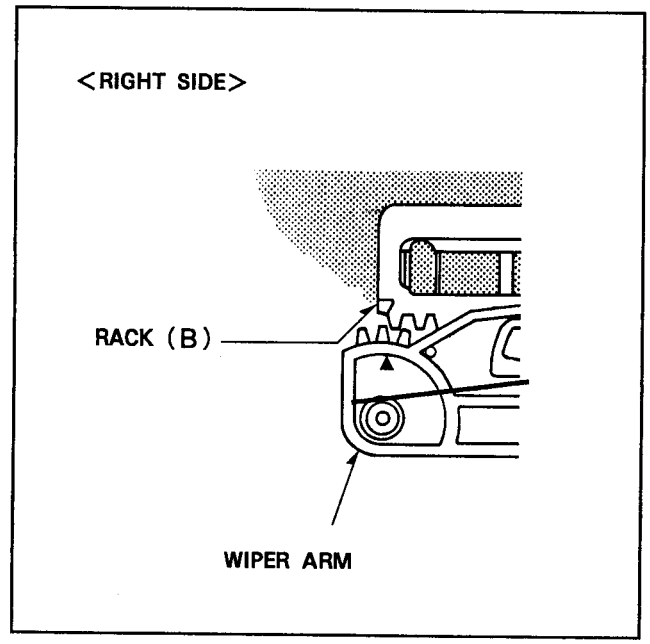


Fig.M48

4. Install the cassette compartment (without cassette holder) to the mechanical chassis so that mark on the Holder Connection Gear should line up with first tooth of the Rack Gear as shown in Fig.M49.

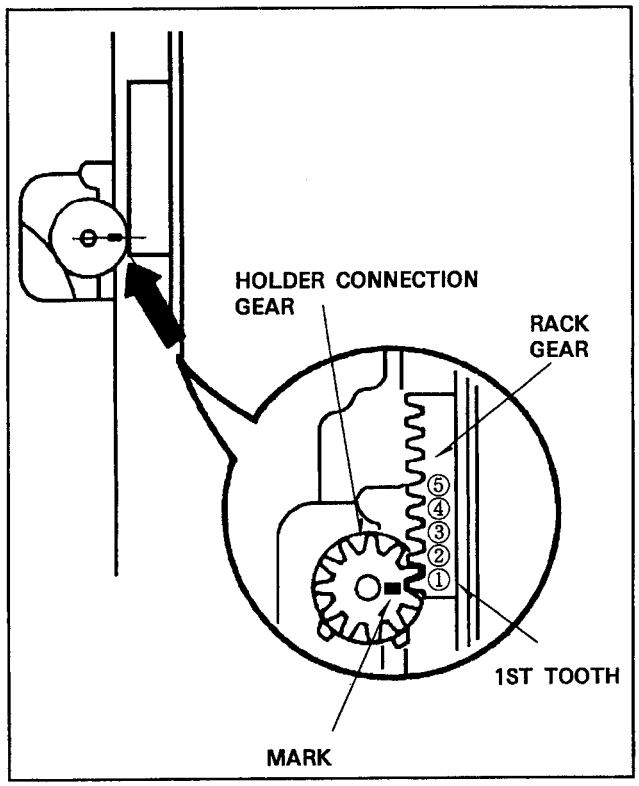


Fig.M49

5. Tighten 4 screws as shown in Fig.M50.
6. Manually move the loading mechanism toward the EJECT position by turn the Loading Motor and stop just before completion, so that the Wiper Arm straight up.
7. Install the Cassette Holder Unit in the Cassette Compartment Base as shown in Fig.M51.
8. Install the Top Plate on the Cassette Compartment Base.
9. Manually confirm that front loading and main loading run smoothly.

<NOTE>
For proper front loading, the guide pin on the opener lever should follow the upper track of the right side panel as shown in Fig.M52.

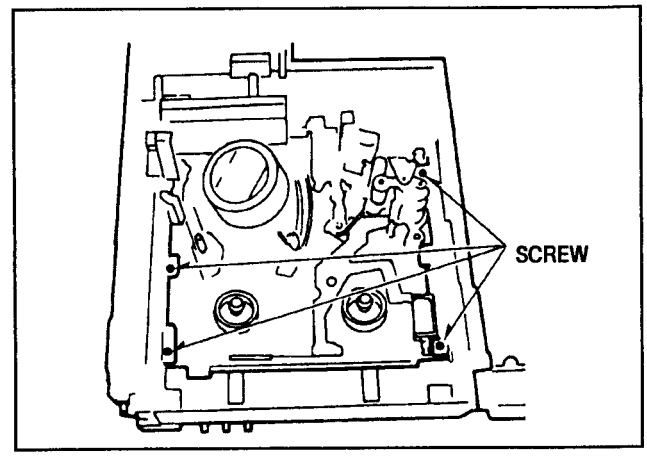


Fig.M50

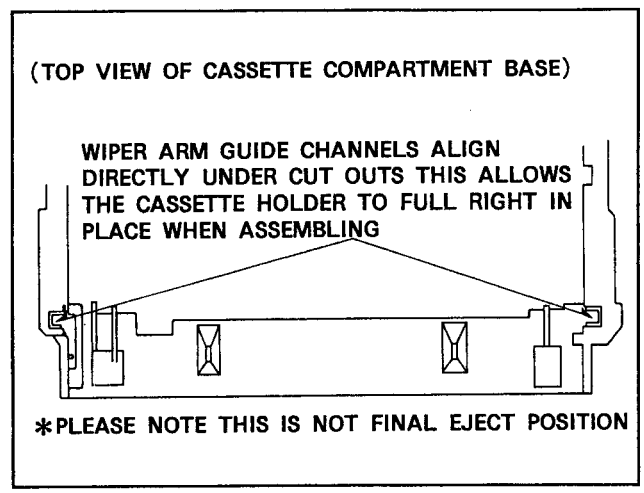

(TOP VIEW OF CASSETTE COMPARTMENT BASE)
WIPER ARM GUIDE CHANNELS ALIGN DIRECTLY UNDER CUT OUTS THIS ALLOWS THE CASSETTE HOLDER TO FULL RIGHT IN PLACE WHEN ASSEMBLING
*PLEASE NOTE THIS IS NOT FINAL EJECT POSITION

Fig.M51

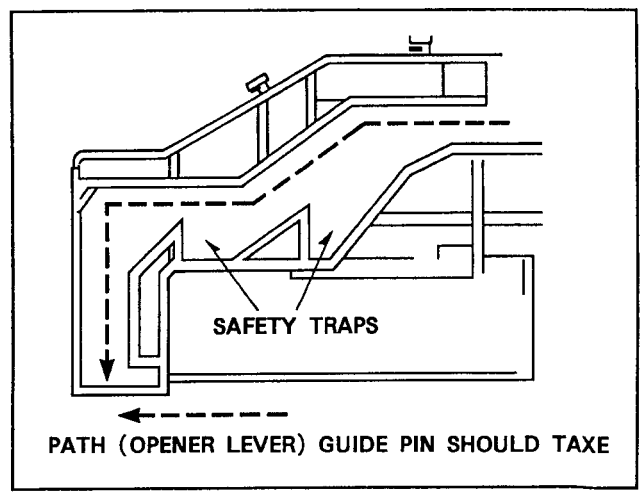


Fig.M52

Order No. VRD9704004S8

Service Manual

Supplement

Effective from : Running Change

Video Product

Model No. All K-Mechanism

Subject : Addition of Parts

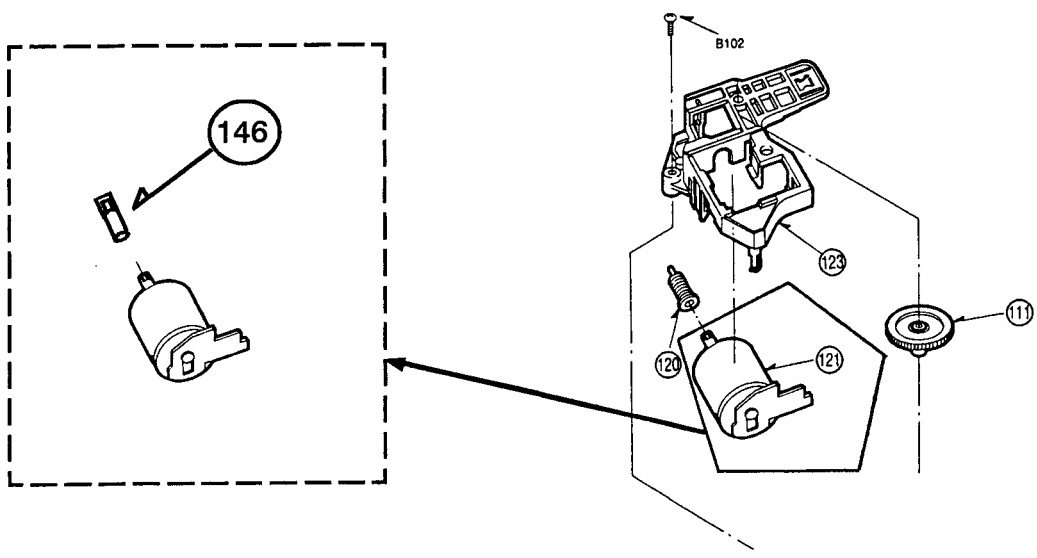
Please use this service manual together with the service manual for Order No. and Model No. All K-Mechanism

INTERCHANGEABILITY CODE												See the I/C column on the following Part Number List
	Parts	Production		Parts	Production		Parts	Production		Parts	Production	E	Addition
A	Original	Early	B	Original	Early	C	Original	Early	D	Original	Early	F	Deletion
	New	Late		New	Late		New	Late		New	Late	G	Other

Parts Number List

Ref No.	Original Part No.	New Part No.	Part Name & Description	I/C	Remarks
146(4)	————	VDP1434	LOADIND MOTOR COUPLING	E	

NOTE : Introduction of New jig for Loading Motor Coupling insertion.
Jig No. : VFK1322
Due to the height adjustment of coupling has to be done when the coupling is inserted to the Loading motor, the inserter jig must be required when mount the coupling.



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Printed in Japan

⚠ WARNING

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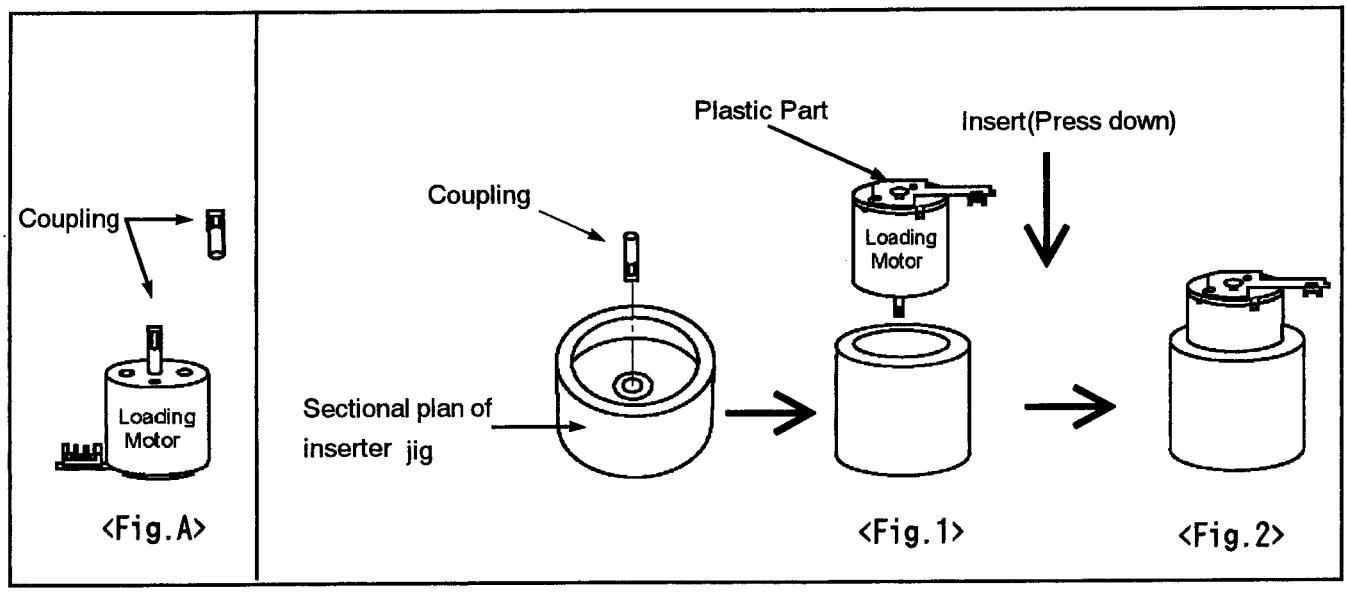
Replacement of the coupling

1. Remove the defective motor coupling from the loading motor <Fig. A>
2. Set a spare motor coupling into the center hole of the inserter jig (VFK1322) as shown in Fig. 1.
   NOTE : Pay attention of the directionality of a spare motor coupling.
3. Set the loading motor into the inserter jig and attach the coupling on it as shown in Fig. 2.
   NOTE : Press the plastic part of the loading motor or down till the motor shaft touches the bottom of the inserter jig.
4. Take the loading motor with the coupling attached out of the inserter jig.



<Fig.A> <Fig.1> <Fig.2>

Printed by: Schaltungsdienst Lange, Berlin (GERMANY)

! Warning

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advice non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service manual by anyone else could result in serious injury or death.

Order No. VSD9806S222
D1,D2

Service Manual

Supplement

NTSC/PAL **Video Product**

Subject : Change of Microcomputer (IC6001)

Please use this supplement together with the Service Manual as follows :

Model No.	Bulletin No.	Order No.	Effective from
AG-RT600P	8	VSD9509M262	'98 Running Change
AG-1070DCP	13	VSD9409M253	'98 Running Change
AG-5210P	16	VSD9401M241	'98 Running Change
AG-6124P	16	VSD9409M253	'98 Running Change
AG-1070DCE	12	VSD9411M638	'98 Running Change
AG-5260B	14	VSD9404M633	'98 Running Change
AG-5260E	14	VSD9411M638	'98 Running Change
AG-6124B	14	VSD9406M635	'98 Running Change
AG-6124E	14	VSD9406M635	'98 Running Change

Board: MAIN C.B.A.

The Servo/System control Microcomputer (IC6001) has been changed for factory automation system.

Interchangeability Code (I/C)

A	Original or new parts may be used in early or late production set. Use original parts until exhausted, then stock new parts.
B	Original parts may be used in early production sets only. New parts may be used in early or late production sets. Use original parts possible then stock new parts.
C	New parts only may be used in early or late production sets.
D	Original parts may be used in early production sets only. New parts may be used in late production sets only. Stock both original and new parts.
E	Others

Part Number

Ref. No.	Original Part No.	New Part No.	Part Name & Descriptions	Pcs	I/C	Remarks
IC6001	MN67434VMEE	MN67434AA	IC	1		AG-5210P, AG-5260B, AG-5260E
IC6001	MN67434VMER	MN67434AB	IC	1		AG-RT600P
IC6001	MN67434VMEX	MN67434AC	IC	1		AG-6124P, AG-6124B, AG-6124E AG-1070DCP, AG-1070DCE

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